360iResearch

Chemical Surface Treatment Market

Global Forecast 2026-2032

MRR-69324464D3E2 | October 2026

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1. Preface

1.1. Objectives of the Study

- Which documented chemical offerings participate in the accepted Product Function and Substrate Material categories, and how can their commercial scope be distinguished from treatment equipment, finishing services, upstream inputs, and downstream finished articles?
- Who controls chemical selection and supplier approval in Captive Finishing Operations and Contract Finishing Operations, and which qualification, compatibility, supply-continuity, and switching requirements must a supplier satisfy?
- How do Treatment Platform, Treatment Objective, and End-Use Industry relate to documented buyer requirements, and what evidence distinguishes an advertised application from an accepted commercial offering?
- Which jurisdiction-specific permissions, restrictions, and customer requirements affect access for the accepted Chromium Chemistry categories, without assuming that a chemistry designation establishes legal permission or buyer acceptance?
- What documented distribution, resale, ownership, or licensing relationships establish a supplier's commercial route to buyers, and which delivery, support, and account responsibilities remain with each party?
- Which evidenced portfolio, qualification, service, and geographic capabilities distinguish suppliers, and under what conditions would direct supply, an intermediary relationship, or a commercial partnership address a specific access requirement?
- How do Liquids, Dry Solids, and Pastes and Gels relate to documented commercial availability and buyer delivery, storage, and support requirements, and how should those conditions inform sourcing choices?

1.2. Market Definition

Chemical Surface Treatment covers the Global market for chemical offerings supplied for the preparation, treatment, finishing, and protection of material surfaces within the included Product Function categories. Both Nonelectrolytic Chemical Treatment and Electrolytic Treatment are included across Metals, comprising Ferrous Metals and Nonferrous Metals; Polymers and Polymer Composites; Glass and Ceramics; and Semiconductor Materials.

The buyer boundary includes Captive Finishing Operations and Contract Finishing Operations, reached through Direct Sales and Distributor and Reseller Sales. End-use industries identify the destination of treated articles and are distinct from the identity of the chemical purchaser or the party controlling supplier approval. The accepted treatment objectives, supply forms, and Chromium Chemistry categories remain included throughout the study.

The studied offering is the treatment chemical, not the total value of treatment machinery, finishing services, or downstream finished articles. Upstream materials, equipment, service relationships, and downstream manufacturing are relevant where they explain chemical

selection, qualification, distribution, or competition. An upstream material participates when the supplied offering falls within an included chemical function; a supplier's adjacent activities do not automatically bring its entire portfolio into the market.

1.3. Market Segmentation & Coverage

Product Function covers Cleaners and Degreasers; Pickling and Descaling Agents; Etchants; Polishing and Brightening Agents; Strippers; Conditioners and Activators; Galvanizing Fluxes; Adhesion-Promoting Pretreatments; Conversion Coating and Passivation Chemicals; Metal-Deposition Chemicals; Anodizing Chemicals; Colorants and Coloring Additives; Sealing Chemicals; and Corrosion Inhibitors and Rust Preventives. This axis identifies the chemical offering's commercial role rather than the value of the downstream treatment service.

Treatment Platform distinguishes Nonelectrolytic Chemical Treatment and Electrolytic Treatment. Treatment Objective separately covers Corrosion and Chemical Resistance; Adhesion and Joining Performance; Wear and Friction Performance; Electrical Performance; Appearance and Optical Performance; Surface Cleanliness and Contamination Control; Dimensional and Surface Texture Control; Thermal Management; and Biological Interface Performance. Platform and objective describe treatment context and intended outcome without establishing product equivalence or approval for a particular application.

End-Use Industry includes Road Vehicles; Aerospace and Defense; Rail and Marine Transportation; Electrical and Electronics; Industrial Machinery, Tools, and Instruments; Building and Construction; Packaging and Containers; Medical and Dental Devices; Household and Recreational Goods; Jewelry, Personal Accessories, and Coinage; Printing and Graphic Arts; and Metals and Metal Products. These categories organize downstream application requirements without assuming that the end-use manufacturer purchases the chemicals directly.

Buyer Operating Model distinguishes Captive Finishing Operations and Contract Finishing Operations, keeping the purchaser's business role separate from downstream industry. Supply Form covers Liquids; Dry Solids; and Pastes and Gels as commercial offering formats, not instructions for preparation or use.

Sales Channel distinguishes Direct Sales and Distributor and Reseller Sales. It provides a lens for examining commercial access, account ownership, and delivery or support responsibilities without presuming that an intermediary relationship establishes exclusive rights.

Substrate Material covers Metals, divided into Ferrous Metals and Nonferrous Metals; Polymers and Polymer Composites; Glass and Ceramics; and Semiconductor Materials. This axis identifies the material context of the studied offering without extending the boundary to the full value of the substrate or finished article.

Chromium Chemistry distinguishes Hexavalent Chromium-Containing and Hexavalent Chromium-Free. Within Hexavalent Chromium-Free, Chromium-Containing and Chromium-Free remain separate categories. These categories support commercial and regulatory comparison but do not themselves determine jurisdiction-specific permission or buyer acceptance.

All axes operate within the Global boundary as independent analytical views of the same chemical market. Their category totals are not additive across axes, and an offering's relevance to multiple attributes does not establish multiple distinct commercial contributions.

Table 1. Global Chemical Surface Treatment Market Segmentation & Coverage

Segmentation	Coverage
Buyer Operating Model	• Captive Finishing Operations • Contract Finishing Operations

Chromium Chemistry	• Hexavalent Chromium-Free
	  o Chromium-Free
	  o Chromium-Containing
	• Hexavalent Chromium-Containing

End-Use Industry	• Electrical and Electronics • Road Vehicles • Industrial Machinery, Tools, and Instruments • Metals and Metal Products • Building and Construction • Aerospace and Defense • Household and Recreational Goods • Jewelry, Personal Accessories, and Coinage • Packaging and Containers • Medical and Dental Devices • Rail and Marine Transportation • Printing and Graphic Arts
Product Function	• Cleaners and Degreasers • Polishing and Brightening Agents • Metal-Deposition Chemicals • Etchants • Conversion Coating and Passivation Chemicals • Strippers • Pickling and Descaling Agents • Adhesion-Promoting Pretreatments • Corrosion Inhibitors and Rust Preventives • Conditioners and Activators • Sealing Chemicals • Anodizing Chemicals • Galvanizing Fluxes • Colorants and Coloring Additives
Sales Channel	• Direct Sales • Distributor and Reseller Sales

Substrate Material	• Metals
	  o Ferrous Metals
	  o Nonferrous Metals
	• Semiconductor Materials
	• Polymers and Polymer Composites
	• Glass and Ceramics

Table 1 - continued

Segmentation	Coverage
Supply Form	• Liquids • Dry Solids • Pastes and Gels
Treatment Objective	• Dimensional and Surface Texture Control • Surface Cleanliness and Contamination Control • Corrosion and Chemical Resistance • Electrical Performance • Adhesion and Joining Performance • Wear and Friction Performance • Appearance and Optical Performance • Thermal Management • Biological Interface Performance
Treatment Platform	• Nonelectrolytic Chemical Treatment • Electrolytic Treatment

Sources & Evidence

1. European Commission Decision M.7498 - Compagnie de Saint-Gobain/Sika, July 22, 2015

· Taxonomy evidence: Paragraphs xx.xx-xx.xx independently recognize glass cleaners, surface activators, and primers as automotive-glass surface-treatment product groups. This supports the glass portion of the retained combined category, not ceramic coverage or 2025 Global sales. ([ec.europa.eu](https://ec.europa.eu/competition/mergers/cases/decisions/m7498_20150722_20310_4457021_EN.pdf))

· Taxonomy evidence: The decision's automotive-glass product distinctions establish an independent commercial nonmetal treatment context. Applying that context to the receiving-material axis is an analytical mapping; it does not admit all primers, adhesives, or nonmetal treatment portfolios. ([ec.europa.eu](https://ec.europa.eu/competition/mergers/cases/decisions/m7498_20150722_20310_4457021_EN.pdf))

· Taxonomy evidence: Paragraph xx.xx distinguishes glass surface-treatment products from the subsequently applied adhesive and describes their adhesion-related purpose. This supports an adhesion objective separately from purchased chemical function and substrate. ([ec.europa.eu](https://ec.europa.eu/competition/mergers/cases/decisions/m7498_20150722_20310_4457021_EN.pdf))

· Taxonomy evidence: In its 2015 automotive-glass assessment, the Commission separately considered glass cleaners, surface activators, and primers alongside adhesives. This establishes independently recognized surface-preparation purchases in that EEA application, not universal inclusion of every primer or adhesive. ([ec.europa.eu](https://ec.europa.eu/competition/mergers/cases/decisions/m7498_20150722_20310_4457021_EN.pdf))

· Taxonomy evidence: The decision independently recognizes glass cleaners as a commercial surface-treatment product group, supporting analogous dedicated nonmetal cleaners within the provisional boundary. ([ec.europa.eu](https://ec.europa.eu/competition/mergers/cases/decisions/m7498_20150722_20310_4457021_EN.pdf))

2. Electrical and Electronic Components Effluent Guidelines - U.S. EPA

   · Taxonomy evidence: EPA separately recognizes semiconductor manufacturing within the Electrical and Electronic Components category and identifies cleaning, degreasing, and etching among associated activities. This establishes category context, not eligible treatment-chemical product sales or the report's bare-semiconductor inclusion boundary.
   ([epa.gov](https://www.epa.gov/eg/electrical-and-electronic-components-effluent-guidelines))

   · Taxonomy evidence: The page identifies semiconductors and electronic crystals as distinct industry settings and provides cross-category guidance concerning semiconductor facilities and metal finishing. Regulatory applicability therefore cannot substitute for the report's commercial product boundary.
   ([epa.gov](https://www.epa.gov/eg/electrical-and-electronic-components-effluent-guidelines))

   · Taxonomy evidence: EPA's electrical-and-electronic industry description includes etching but also adjacent mechanical and manufacturing activities. Recognition of etching in that setting does not establish inclusion of every wafer-processing chemical in the retained product-function category.
   ([epa.gov](https://www.epa.gov/eg/electrical-and-electronic-components-effluent-guidelines))

3. Cooperative Patent Classification - C23G Definitions

   · Taxonomy evidence: C23G explicitly excludes nonmetallic-material treatment and records overlapping cleaning, pickling, stripping, and etching terminology. It cannot independently establish the full Global nonmetal boundary or a mutually exclusive commercial product partition.
   ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC23G.html))

   · Taxonomy evidence: The glossary includes removal of nonmetallic inorganic coatings within pickling. Assigning applied-film removal to Strippers is therefore an explicit commercial-purpose allocation convention, not a claim that CPC terminology supplies exclusive peers.
   ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC23G.html))

   · Taxonomy evidence: C23G lists etching and several cleaning or stripping expressions among overlapping patent usages. Documented purchased purpose, rather than a product name alone, is required to distinguish retained pickling preparations from etchants and applied-coating strippers.
   ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC23G.html))

   · Taxonomy evidence: The C23G glossary associates pickling with removal of rust, scale, and corrosion deposits. It also records overlapping terminology, so product labels alone cannot establish allocation.
   ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC23G.html))

   · Taxonomy evidence: C23G distinguishes degreasing through removal of organic surface contamination from pickling directed at inorganic surface deposits. This supports separate purchased functions rather than a single undifferentiated cleaning category.
   ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC23G.html))

   · Taxonomy evidence: C23G explicitly concerns chemical cleaning and degreasing other than electrolysis and refers electrolytic equivalents to C25F.
   ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC23G.html))

4. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys, May 2, 2006

   · Taxonomy evidence: Section xx.xx.xx.xx distinguishes hexavalent-chromium-containing and no-hexavalent-chromium conversion materials. This is a specific procurement classification, not a universal trace-content or compliance rule.
   ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

   · Taxonomy evidence: Type I identifies conversion-material compositions containing hexavalent chromium, independently supporting this composition branch for the specified product setting.
   ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

   · Taxonomy evidence: Type II is defined by absence of hexavalent chromium; that wording does not establish absence of every chromium constituent.
   ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

   · Taxonomy evidence: The specification covers chemical conversion materials, separately classified by composition, performance class, supplied form, and application method.
   ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

   · Taxonomy evidence: Section xx.xx.xx.xx distinguishes liquid and powder forms, including a thixotropic liquid; thixotropy alone therefore does not establish gel classification.
   ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

   · Taxonomy evidence: The supplied-form classification independently recognizes concentrated and premixed liquid conversion materials. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

   · Taxonomy evidence: The supplied-form classification independently recognizes powder conversion materials.
   ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

   · Taxonomy evidence: Class xx.xx explicitly recognizes corrosion protection combined with low electrical resistance, supporting an electrical-contact requirement without establishing sales allocations.
   ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

5. North American Product Classification System Canada 2022 Version 1.0

   · Taxonomy evidence: NAPCS Canada 2022 code xx.xx identifies metal-treating and plating compounds as chemical goods. The same classification separately identifies fee-based metal-finishing services, supporting a chemical-product rather than service-revenue boundary. Its coverage is North American classification evidence, not a complete global partition.
   ([www150.statcan.gc.ca](https://www150.statcan.gc.ca/n1/pub/xx.xx-xx.xx-x/xx.xx-xx.xx-x2022001-eng.pdf))

   · Taxonomy evidence: Illustrative products under code xx.xx include industrial metal-cleaning degreasers.
   ([www150.statcan.gc.ca](https://www150.statcan.gc.ca/n1/pub/xx.xx-xx.xx-x/xx.xx-xx.xx-x2022001-eng.pdf))

   · Taxonomy evidence: Code xx.xx explicitly includes electroplating solutions and additives.
   ([www150.statcan.gc.ca](https://www150.statcan.gc.ca/n1/pub/xx.xx-xx.xx-x/xx.xx-xx.xx-x2022001-eng.pdf))

   · Taxonomy evidence: The code includes corrosion inhibitors and rust-inhibitor and rust-preventive preparations. Inclusion here remains restricted to the captured surface-treatment boundary.
   ([www150.statcan.gc.ca](https://www150.statcan.gc.ca/n1/pub/xx.xx-xx.xx-x/xx.xx-xx.xx-x2022001-eng.pdf))

6. Metal Finishing Effluent Guidelines - U.S. EPA
   - Taxonomy evidence: EPA identifies electroplating, electroless plating, anodizing, conversion-related coating, chemical etching, and printed-circuit-board manufacture as distinct core operation groups. These support functional distinctions but do not measure chemical-product sales or establish global market coverage. ([epa.gov](https://www.epa.gov/eg/metal-finishing-effluent-guidelines))
   - Taxonomy evidence: The EPA operation list separately recognizes chemical etching and milling. ([epa.gov](https://www.epa.gov/eg/metal-finishing-effluent-guidelines))
   - Taxonomy evidence: The EPA list identifies phosphating and chromating within its coating group. ([epa.gov](https://www.epa.gov/eg/metal-finishing-effluent-guidelines))
   - Taxonomy evidence: Electroplating and electroless plating are separately recognized operations, supporting one deposition function that can cross platform classes. ([epa.gov](https://www.epa.gov/eg/metal-finishing-effluent-guidelines))
   - Taxonomy evidence: Anodizing is explicitly identified as a core operation separate from plating and chemical etching. ([epa.gov](https://www.epa.gov/eg/metal-finishing-effluent-guidelines))
   - Taxonomy evidence: EPA states that metal-finishing coverage is process-defined rather than restricted to one industrial sector, supporting the distinction between treatment activity and downstream industry. ([epa.gov](https://www.epa.gov/eg/metal-finishing-effluent-guidelines))
   - Taxonomy evidence: EPA identifies machinery and measuring, analyzing, controlling, and optical-instrument industries among the industrial groups associated with metal-finishing facilities. This supports the machinery-and-instruments buyer grouping, not its demand weight. ([epa.gov](https://www.epa.gov/eg/metal-finishing-effluent-guidelines))
   - Taxonomy evidence: EPA identifies electrical and electronic machinery, equipment, and supplies among the industrial groups associated with metal-finishing facilities. ([epa.gov](https://www.epa.gov/eg/metal-finishing-effluent-guidelines))
7. Cooperative Patent Classification - C23F Definitions
   - Taxonomy evidence: C23F separately classifies chemical etching and identifies circuit-board microetching through related classification references. It distinguishes substrate-material removal from cleaning classifications. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC23F.html))
   - Taxonomy evidence: C23F recognizes chemical polishing or brightening separately from etching and refers electrolytic polishing to C25F. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC23F.html))
   - Taxonomy evidence: C23F recognizes inhibitors applied to metal surfaces and distinguishes them from protective coating classifications and inhibitors added to pickling products. This supports a bounded surface-preservation category. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC23F.html))
8. Cooperative Patent Classification - C25F Definitions
   - Taxonomy evidence: C25F recognizes electrolytic cleaning, oxide removal, etching, polishing, and coating stripping. Consequently, electrolytic treatment is not synonymous with metal deposition; the platform can cross several product functions. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC25F.html))
   - Taxonomy evidence: The C25F scope establishes a recognized electrolytic material-removal platform distinct from its referenced chemical-treatment classifications. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC25F.html))
   - Taxonomy evidence: Electrolytic cleaning and degreasing are explicitly recognized functions. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC25F.html))
   - Taxonomy evidence: Electrolytic pickling and descaling are explicitly recognized functions. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC25F.html))
   - Taxonomy evidence: C25F separately identifies electrolytic polishing. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC25F.html))
   - Taxonomy evidence: C25F includes electrolytic removal of metallic coatings, supporting stripping chemistry beyond paint removal. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC25F.html))

9. Cooperative Patent Classification - C23C Definitions

- Taxonomy evidence: C23C xx.xx/xx.xx groups conversion coatings and metal passivation, while distinguishing chemical coating and contact plating elsewhere. This supports combining conversion and passivation without equating them with deposited metal layers. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC23C.html))
- Taxonomy evidence: C23C recognizes electroless coating compositions and contact plating; its terminology associates contact plating with immersion or displacement plating. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC23C.html))
- Taxonomy evidence: The electroless-plating definition expressly excludes external electrical power, supporting its placement in the nonelectrolytic peer despite its deposition function. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC23C.html))

10. Cooperative Patent Classification - C23C Scheme

- Taxonomy evidence: C23C xx.xx/xx.xx includes chemical activation and sensitization before coating; C23C xx.xx/xx.xx separately identifies pretreatment before conversion coating. These classification distinctions support a preparatory conditioning and activation function. Excluding cleaning, etching, bonding promoters, and fluxes from this peer is the present analytical allocation rule. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/cpc-C23C.html))

11. Cooperative Patent Classification - C25D Scheme

- Taxonomy evidence: C25D xx.xx/xx.xx identifies electroplating solutions as a recognized classification group. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/cpc-C25D.html))
- Taxonomy evidence: The C25D scheme distinguishes anodizing from its pretreatment and after-treatment categories, supporting separate allocation of anodizing-line consumables by function. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/cpc-C25D.html))
- Taxonomy evidence: The scheme separately identifies coloring after-treatments and treatments using organic dyes. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/cpc-C25D.html))
- Taxonomy evidence: Pore sealing and sealing-layer after-treatments receive distinct classification entries. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/cpc-C25D.html))
- Taxonomy evidence: C25D recognizes electrolytic deposition and anodizing while separately identifying chemical after-treatment, supporting treatment-step rather than whole-line platform allocation. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/cpc-C25D.html))

12. ASTM A967/A967M-25 - Chemical Passivation of Stainless Steel Parts

- Taxonomy evidence: ASTM A967/A967M-xx.xx recognizes passivation treatments for stainless steel and distinguishes cleaning, descaling, and passivation within its scope. Its abstract recognizes both immersion-based chemical and electrochemical passivation. No treatment instructions are used here. ([store.astm.org](https://store.astm.org/a0967_a0967m-xx.xx.html))
- Taxonomy evidence: Recognition of chemical and electrochemical alternatives for the same passivation function supports treating purchased function and treatment platform as separate axes. ([store.astm.org](https://store.astm.org/a0967_a0967m-xx.xx.html))

13. Cooperative Patent Classification - C09D Scheme

- Taxonomy evidence: C09D xx.xx/xx.xx explicitly identifies chemical paint and ink removers. This supports a stripping-product function distinct from subsequently purchased coating materials; only industrial workpiece uses inside the captured boundary are retained. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/cpc-C09D.html))

14. OSHA SIC Manual - Industry 2899

- Taxonomy evidence: The official SIC xx.xx description explicitly lists galvanizing fluxes among manufactured chemical preparations. This establishes a recognized chemical-goods family independently of coating-service activity. Limiting this category to galvanizing surface-preparation consumables is the present boundary decision. ([osha.gov](https://www.osha.gov/sic-manual/xx.xx))

15. ISO 7599:2018 - Decorative and Protective Anodic Oxidation Coatings

- Taxonomy evidence: ISO xx.xx:2018 recognizes decorative and protective anodic oxidation coatings on aluminum and distinguishes pretreatment from the anodic coating specification. Its scope is narrower than all anodizing applications, so it supports category recognition rather than an exhaustive anodizing-product perimeter. ([iso.org](https://www.iso.org/standard/xx.xx.html?browse=ics))

16. European Commission JRC - Surface Treatment of Metals and Plastics

- Taxonomy evidence: The European industrial reference explicitly covers electrolytic and chemical surface treatment of metals and plastics and notes that installations can contain both. This supports the two-platform distinction; assigning individual chemical purchases by their own treatment step is an analytical inference. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
- Taxonomy evidence: Chemical treatment is explicitly recognized alongside electrolytic treatment within the reference's industrial scope. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
- Taxonomy evidence: Electrolytic treatment is explicitly recognized as a platform that can coexist with chemical treatment in one installation. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))

17. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Taxonomy evidence: The document distinguishes intended surface properties from customer industries, supporting separate analytical objective and industry axes. It does not establish the report's chemical-sales denominator. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))
- Taxonomy evidence: The executive summary identifies corrosion prevention as a treatment purpose. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))
- Taxonomy evidence: The executive summary identifies adhesion to subsequent treatments; Section xx.xx.xx.xx also recognizes solderability preservation. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))
- Taxonomy evidence: Chapter xx.xx identifies conductivity and electronic circuit interconnection requirements. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))
- Taxonomy evidence: The glossary recognizes dimensions as a purpose of electroplating. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))
- Taxonomy evidence: Section xx.xx treats surface finishing as cross-industry activity. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))
- Taxonomy evidence: Section xx.xx names heavy engineering and hardware customers. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))
- Taxonomy evidence: Section xx.xx names construction and bathroom fittings. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))
- Taxonomy evidence: Section xx.xx names food and drink containers. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))
- Taxonomy evidence: Section xx.xx names domestic appliances and furniture. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))
- Taxonomy evidence: Section xx.xx names jewelry, ornaments, and coinage. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))
- Taxonomy evidence: Section xx.xx names printing customers. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))
- Taxonomy evidence: Table xx.xx includes treated marine-engine workpieces. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))
- Taxonomy evidence: Section xx.xx.xx.xx distinguishes delivered liquid and solid chemical inputs. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))
- Taxonomy evidence: Section xx.xx.xx.xx identifies liquid deliveries and proprietary treatment solutions. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))
- Taxonomy evidence: Section xx.xx.xx.xx identifies powders, pellets, and flakes as supplied solid forms. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))
- Taxonomy evidence: The document distinguishes metal, plastic, and circuit-board receiving materials. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))
- Taxonomy evidence: The reference explicitly covers treatment of metal workpieces. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))

18. Preliminary Review of the Metal Finishing Category - April 2018

- Taxonomy evidence: EPA's April 2018 review distinguishes captive facilities from job shops and separately reports the industries served. Its regulatory material-ownership definitions are not adopted as this report's Global allocation rule. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Taxonomy evidence: The review identifies captive metal-finishing facilities as a distinct operating setting. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Taxonomy evidence: The review identifies job shops separately from captive operations, establishing the external-customer finishing setting. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Taxonomy evidence: Markets served by the visited facilities included automotive customers. This establishes an observed use category, not a Global demand weight. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Taxonomy evidence: The observed markets included aircraft/aerospace and military customers. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Taxonomy evidence: The observed markets included electronics, explicitly including semiconductors. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Taxonomy evidence: The observed markets included medical devices. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Taxonomy evidence: The observed markets included jewelry, medals, trophies, and awards. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

19. ISO - ICS 25.220.20: Surface Treatment

- Taxonomy evidence: ISO's surface-treatment classification lists standards addressing corrosion and chemical resistance of treated surfaces, supporting those requirements as distinct performance characteristics. ([iso.org](https://www.iso.org/ics/xx.xx.xx.xx/x/))
- Taxonomy evidence: The classification lists standards addressing abrasion resistance of anodic coatings and friction characteristics of chemical conversion coatings. These establish performance categories, not treatment instructions or purchasing volumes. ([iso.org](https://www.iso.org/ics/xx.xx.xx.xx/x/))
- Taxonomy evidence: The classification separately recognizes decorative anodic coatings, appearance conventions, reflectance, gloss, and image clarity. ([iso.org](https://www.iso.org/ics/xx.xx.xx.xx/x/))

20. ISO 16232:2018 - Road Vehicles - Cleanliness of Components and Systems

- Taxonomy evidence: ISO xx.xx:2018 recognizes documented technical-cleanliness requirements for functionally relevant road-vehicle components and systems, including incoming and outgoing components. Its scope concerns particulate contamination and excludes grease and oil films. This supports an independent cleanliness objective without establishing all residue-related applications. ([iso.org](https://www.iso.org/standard/xx.xx.html?browse=ics))
- Taxonomy evidence: The standard connects cleanliness specifications to the automotive quality chain and identifies cleaning, surface treatment, and assembly as relevant manufacturing activities. ([iso.org](https://www.iso.org/standard/xx.xx.html?browse=ics))

21. ISO 15730:2023 - Metallic and Other Inorganic Coatings - Electropolishing as a Means of Smoothing and Passivating Stainless Steel

- Taxonomy evidence: ISO xx.xx:2023 recognizes smoothing of stainless-steel surfaces as a specified finishing purpose and addresses information supplied by the purchaser to the finisher. It supports surface-texture requirements, not a measured market for all dimensional-restoration chemicals. ([iso.org](https://www.iso.org/standard/xx.xx.html?browse=tc))

22. NASA - 7.0 Thermal Control

    · Taxonomy evidence: NASA identifies anodized surfaces among spacecraft thermal-control surface finishes. This establishes a thermal-management use case without bringing thermal hardware, tapes, or standalone paints into the chemical market. ([nasa.gov](https://www.nasa.gov/smallsat-institute/sst-soa/thermal-control/))

    · Taxonomy evidence: The spacecraft thermal-control discussion supplies public end-user context for surface finishes in space applications, independently of a chemical supplier's customer list. ([nasa.gov](https://www.nasa.gov/smallsat-institute/sst-soa/thermal-control/))

23. ISO 17327-1:2018 - Non-Active Surgical Implants - Implant Coating - Part 1: General Requirements

    · Taxonomy evidence: ISO xx.xx-xx.xx:2018 covers intentional surface modifications as well as coatings on non-active surgical implants and recognizes intended functions involving biological fixation and tissue interaction. This supports a biological-interface requirement category, but not clinical efficacy, authorization, or sales of in-scope treatment chemicals. ([iso.org](https://www.iso.org/obp/ui?_escaped_fragment_=iso%3Astd%3Aiso%3A17327%3A-xx.xx%3Aed-xx.xx%3Av1%3Aen))

    · Taxonomy evidence: The standard establishes surgical implants as a distinct application setting for specified surface modifications. Its broader implant-coating scope must not be substituted for chemical-consumables revenue. ([iso.org](https://www.iso.org/obp/ui?_escaped_fragment_=iso%3Astd%3Aiso%3A17327%3A-xx.xx%3Aed-xx.xx%3Av1%3Aen))

24. Development Document for the Final Effluent Limitations Guidelines and Standards for the Metal Products and Machinery Point Source Category - 2003

    · Taxonomy evidence: EPA's 2003 development document separately describes railroad overhaul and heavy-maintenance operations, including chemical cleaning and paint stripping. It also discusses shipyard settings; these are buyer contexts, not chemical-sales totals. ([epa.gov](https://www.epa.gov/sites/default/files/2015-xx.xx/documents/mp-m_dd_2003.pdf))

    · Taxonomy evidence: The document identifies continuously electroplated flat-steel products and steel forming and finishing as industrial treatment settings. This supports a mill-product demand category without counting metal-product revenue. ([epa.gov](https://www.epa.gov/sites/default/files/2015-xx.xx/documents/mp-m_dd_2003.pdf))

    · Taxonomy evidence: The anodizing discussion recognizes heat-transfer requirements alongside corrosion resistance, supporting a separate thermal objective. ([epa.gov](https://www.epa.gov/sites/default/files/2015-xx.xx/documents/mp-m_dd_2003.pdf))

25. North American Industry Classification System - United States, 2022

    · Taxonomy evidence: The 2022 NAICS manual provides distinct product-industry definitions for metals, fabricated products, machinery, electrical equipment, transportation equipment, furniture, medical products, and consumer articles. The proposed sector aggregations are analytical adaptations, not a claim that NAICS measures treatment-chemical demand. ([census.gov](https://www.census.gov/naics/reference_files_tools/2022_NAICS_Manual.pdf))

    · Taxonomy evidence: The manual distinguishes finishing performed for the trade from establishments that fabricate and finish products, which are classified according to the manufactured product. This supports separating contract finishing from integrated manufacturing. ([census.gov](https://www.census.gov/naics/reference_files_tools/2022_NAICS_Manual.pdf))

    · Taxonomy evidence: The manufactured-product classification provides an independent basis for identifying integrated production rather than treating every component supplier as a contract finisher. ([census.gov](https://www.census.gov/naics/reference_files_tools/2022_NAICS_Manual.pdf))

    · Taxonomy evidence: Industry xx.xx recognizes finishing metals and additional materials for the trade, supporting the external-customer operating setting. ([census.gov](https://www.census.gov/naics/reference_files_tools/2022_NAICS_Manual.pdf))

26. From Blank to Bank - Online Exhibition | The Royal Mint Experience

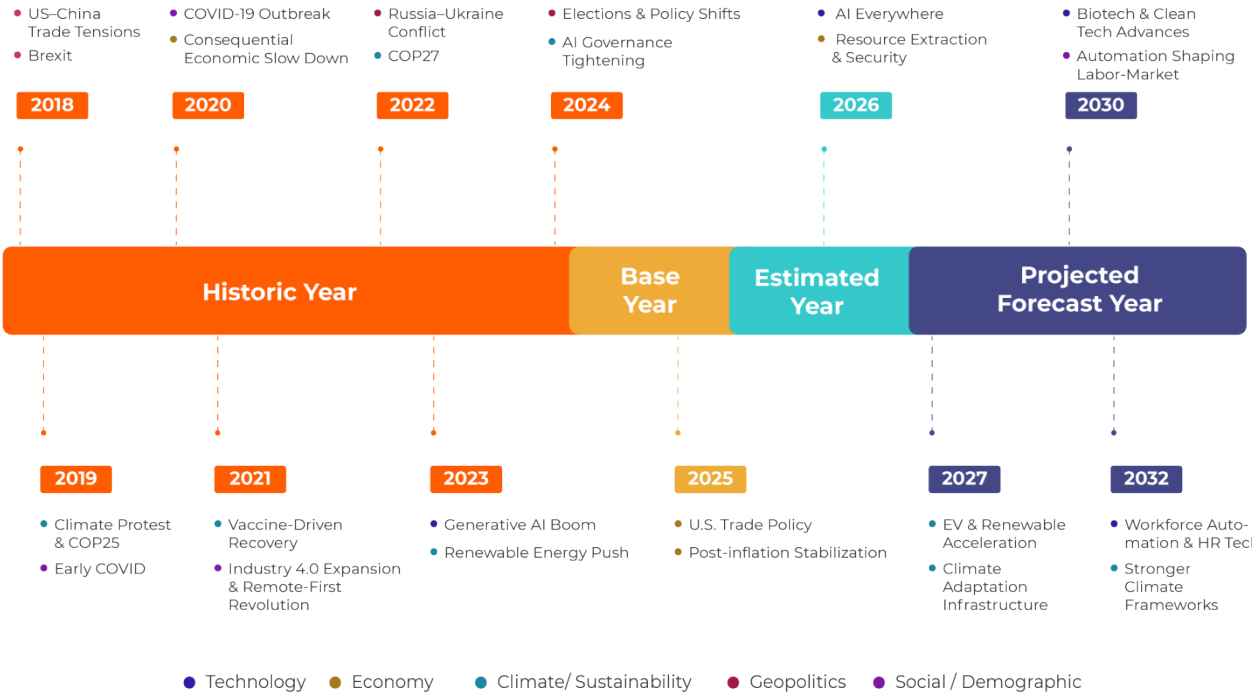
    · Taxonomy evidence: The Royal Mint publicly identifies plated coins among its own manufactured products. This supplies direct buyer-side corroboration for coinage as a surface-treatment destination, without estimating chemical consumption or revenue. ([royalmint.com](https://www.royalmint.com/the-royal-mint-experience/explore-the-exhibition/from-blank-to-bank/))

27. Post weld cleaning using pickling pastes - Health and Safety Executive
    · Taxonomy evidence: HSE identifies proprietary pickling pastes supplied as prepared commercial products, independently establishing paste-form treatment goods rather than merely an application-service category. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm?utm_source=openai))
    · Taxonomy evidence: HSE describes pickling pastes as available mainly from welding-consumable and stainless-steel suppliers. This supports a sector-specific reseller route, not a Global channel share. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm?utm_source=openai))
28. Monthly Wholesale Trade - Definitions, U.S. Census Bureau
    · Taxonomy evidence: Census distinguishes distributors taking title, manufacturers' selling offices, and agents acting for others; it separately defines electronic ordering and drop shipment. These distinctions support classification by economic seller rather than interface or delivery. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    · Taxonomy evidence: Manufacturers' sales branches and offices market their manufacturing enterprise's products. Grouping these controlled offices with direct sales is the report's explicit analytical convention. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    · Taxonomy evidence: A distributor buys and owns products before resale; a wholesaler can make the sale even when the manufacturer delivers directly. ([census.gov](https://www.census.gov/wholesale/definitions.html))
29. European Commission - Case M.8136, BASF / Chemetall, merger decision
    · Taxonomy evidence: Paragraphs xx.xx-xx.xx distinguish logistical system-supplier coordination from end-customer selection and price negotiation with the surface-treatment manufacturer. Customers generally procured coatings and surface-treatment products separately. ([ec.europa.eu](https://ec.europa.eu/competition/mergers/cases/decisions/m8136_184_3.pdf))
    · Taxonomy evidence: The decision documents end customers negotiating surface-treatment product prices with manufacturers, supporting direct manufacturer-facing procurement as a recognized sector relationship. ([ec.europa.eu](https://ec.europa.eu/competition/mergers/cases/decisions/m8136_184_3.pdf))
30. SEMI C1 - Guide for the Analysis of Liquid Chemicals
    · Taxonomy evidence: The standards abstract recognizes liquid chemicals used in semiconductor-device production and chemical-specific purity grades. This supplies contextual commercial support only: it does not establish which products treat bare semiconductor surfaces or fall within this market's functional boundary. ([store-us.semi.org](https://store-us.semi.org/products/c00100-semi-c1-guide-for-the-analysis-of-liquid-chemicals))

1.4. Years Considered for the Study

The study uses 2024 as the historical year, 2025 as the base year, 2026 as the estimated year, and 2032 as the forecast year. These period roles apply to the Global Chemical Surface Treatment market and its accepted segmentation.

Figure 1. Global Chemical Surface Treatment Market, Years Considered for the Study



1.5. Currency Considered for the Study

Monetary reporting uses U.S. dollars (USD), with values expressed in absolute USD rather than a scaled currency unit.

1.6. Language Considered for the Study

The study is published in American English.

1.7. Key Stakeholders

- Surface-treatment chemical suppliers and brand owners: decisions about portfolio participation, customer qualification, commercial rights, channel responsibilities, and support commitments.
- Captive Finishing Operations: decisions about approved chemical sourcing, supplier continuity, switching conditions, and alignment with internal manufacturing and customer requirements.
- Contract Finishing Operations: decisions about chemical selection within customer approvals, supplier support, contractual obligations, and the boundary between purchasing authority and finished-article approval.
- Finished-article manufacturers, original equipment manufacturers, and specification owners: decisions about acceptable treatment outcomes, supplier approval, substitution, and application-specific commercial requirements.

- Distributors, resellers, and licensing partners: decisions about territory and account rights, product access, delivery obligations, technical-service responsibilities, and the durability of supplier relationships.
- Upstream material suppliers and treatment-equipment providers: exposure to chemical selection and compatibility requirements, while keeping their adjacent offerings distinct from the included treatment-chemical business.
- Regulators and surface-finishing industry organizations: interpretation of jurisdiction-specific obligations and industry requirements, with formal legal authority distinguished from guidance or advocacy.
- Investors and corporate development teams: decisions about market participation, capability acquisition, licensing, and channel investment based on attributable offerings and documented commercial rights.

2. Research Methodology

2.1. Introduction

Chemical Surface Treatment is examined as a commercial chemical-offering market in which classification, supplier participation, and buyer access answer different questions. The study approach connects the accepted Global scope and taxonomy to evidence about offerings, business relationships, and purchasing conditions, while distinguishing documented facts from economic interpretation.

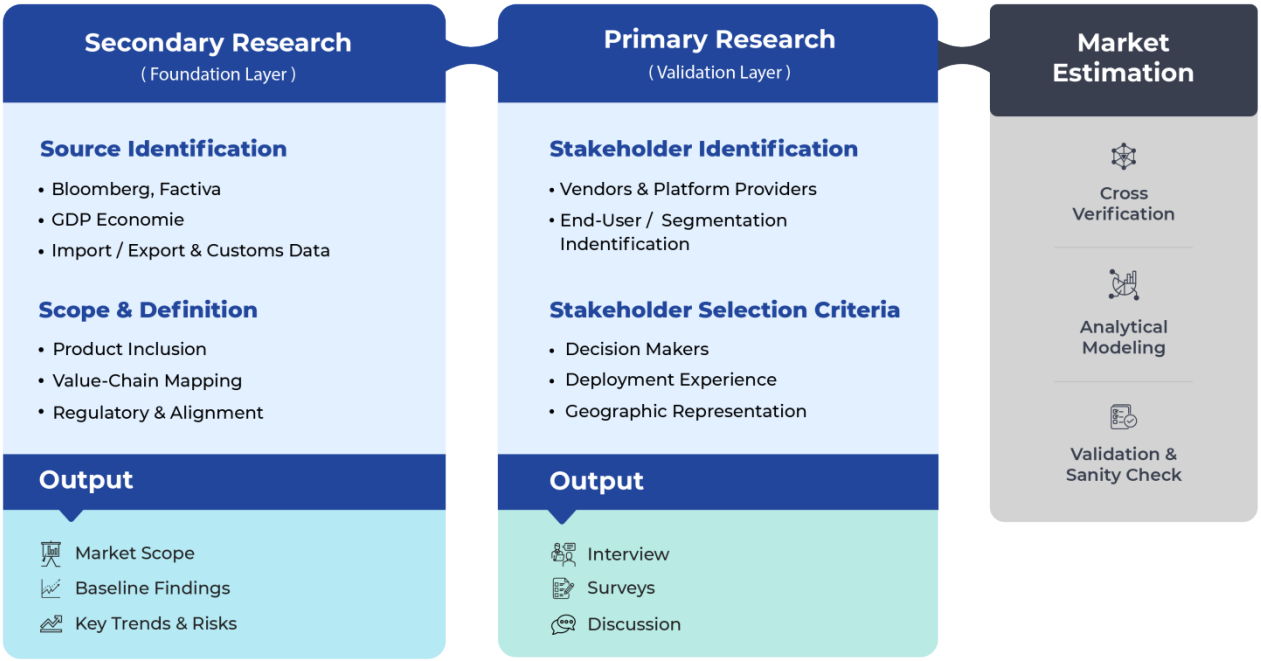
The methodology supports decisions about supplier qualification, sourcing, channel access, and portfolio positioning. It keeps qualitative explanations separate from numerical conclusions and limits each claim to the product, organization, jurisdiction, and period that its supporting information can establish.

2.2. Research Design

The research design separates three questions: whether a chemical offering belongs to the accepted scope, whether an organization has a documented commercial role in supplying it, and whether a particular buyer can access and accept it. Inclusion in the taxonomy establishes the study category, not a supplier's capability or a buyer's approval.

Documentary evidence supports the business fact within its own authority and scope, while analyst-led primary research provides a qualitative challenge layer. Legal status, advertised portfolios, commercial rights, and purchasing conditions are evaluated as separate claims rather than interchangeable evidence of participation.

Figure 2. Global Chemical Surface Treatment Market, Research Design



2.2.1. Primary Research

The analyst team conducted primary research as a qualitative challenge layer for market definition, segmentation, demand conditions, adoption barriers, and competitive interpretation. This work tested analytical assumptions and sharpened explanations of market mechanisms without serving as standalone support for numerical estimates.

The qualitative challenge layer is evaluated alongside secondary evidence within the accepted market scope. It informs conditional market explanations and hypotheses for subsequent quantitative analysis. Numerical estimates require their own supporting evidence, and a forecast derived from a qualitative assumption does not independently validate that assumption. Final interpretation must reconcile the qualitative findings with the completed quantitative results.

2.2.2. Secondary Research

Secondary evidence is interpreted according to what its issuer can establish. Official supplier portfolios and business materials can describe advertised offerings, stated channels, and service commitments. Mandatory filings and public ownership or licensing records can establish disclosed corporate and contractual facts. Regulatory records address the named activity, jurisdiction, and effective period rather than customer adoption.

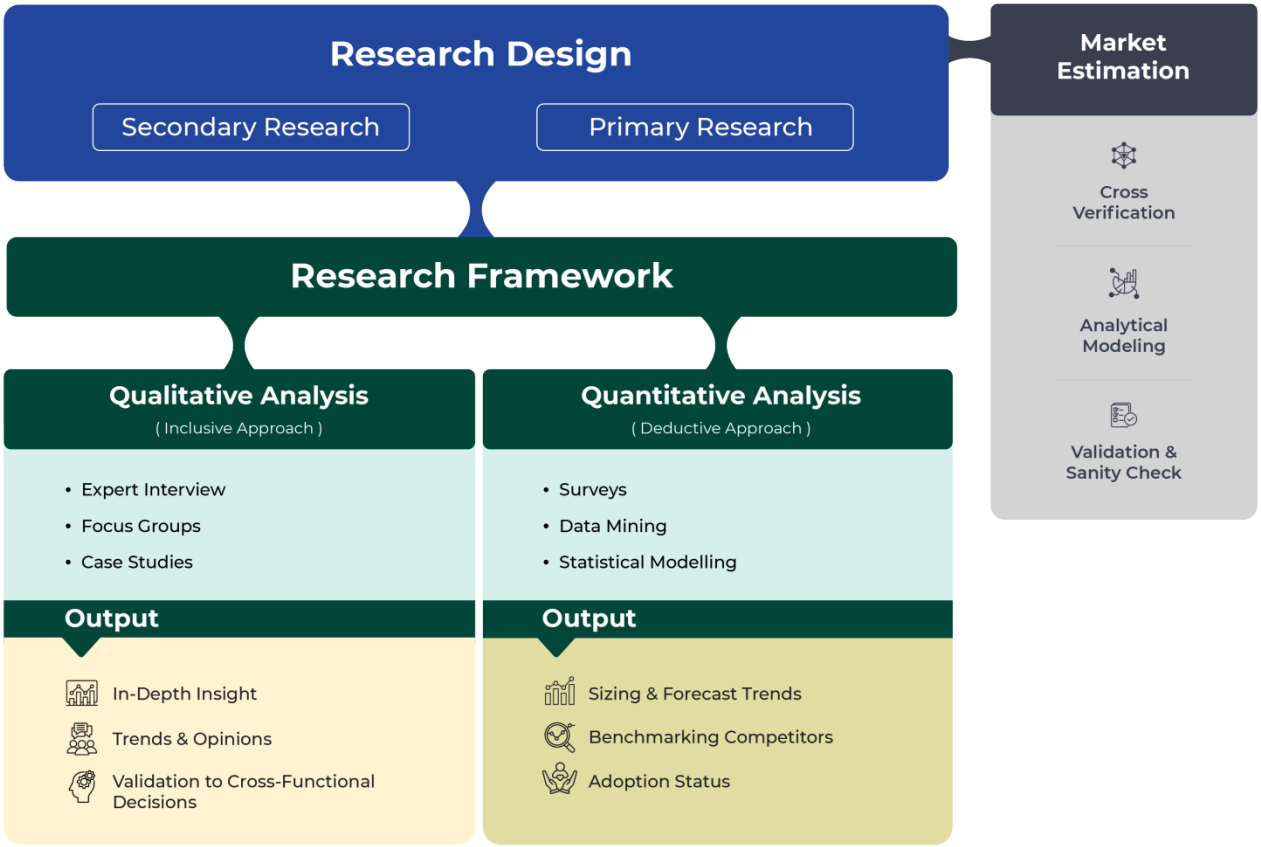
Official statistics and transparent institutional or association data can contextualize relevant industrial activity when their boundaries match the question. Public buyer policies and awards can establish the requirements or commitments of the named purchasing relationship, but do not automatically establish industry-wide practice. Evidence is assessed at the claim level, including its effective period, commercial scope, and underlying authority.

2.3. Research Framework

The framework links definition, classification, commercial participation, comparison, and business decisions. Product Function identifies the chemical's commercial role; Treatment Platform and Substrate Material locate its treatment context; Treatment Objective and End-Use Industry identify the intended outcome and downstream application. Buyer Operating Model, Supply Form, Sales Channel, and Chromium Chemistry provide additional purchasing and access perspectives.

Supplier comparisons require evidence of the relevant offering and business role, rather than general involvement in surface treatment. Measurement comparisons must address the same chemical boundary, geography, and period. Competitive interpretation then asks which documented capabilities and access conditions matter to the identified buyer, with unresolved prerequisites retained as conditions on the decision.

Figure 3. Global Chemical Surface Treatment Market, Research Framework



2.3.1. Qualitative Analysis

Qualitative analysis examines how specification ownership, supplier qualification, switching commitments, distribution rights, and service responsibilities influence commercial choices. Captive Finishing Operations and Contract Finishing Operations are assessed as distinct purchasing contexts, with attention to whether the chemical purchaser also controls approval for the treated article.

Alternative explanations for a purchasing decision remain distinguishable: application fit, customer requirements, regulatory access, continuity of supply, and supplier support are different commercial mechanisms. Technical suitability is not treated as proof of buyer acceptance, and a plausible substitution opportunity remains conditional until the relevant commercial requirements are established.

2.3.2. Quantitative Analysis

The quantitative framework uses the Global boundary, designated study periods, absolute USD reporting convention, and accepted chemical-offering hierarchy as consistency controls. Each segmentation axis provides a different view of the same market; classifications across Product Function, End-Use Industry, Substrate Material, and the other axes are not additive market components.

Where an offering has multiple functions, objectives, or application contexts, any attribution rule must be explicit before comparisons are made. Disclosed business facts, derived estimates, and scenarios remain distinguishable, and qualitative explanations do not independently establish numerical conclusions.

2.4. Market Size Estimation

The estimation boundary is the included Chemical Surface Treatment chemical offering, not the full value of treated articles, finishing services, treatment equipment, or a diversified supplier's operations. Any estimate must preserve that chemical boundary across the Global scope and designated study periods.

The accepted segmentation axes classify the same market from different perspectives. Numerical conclusions require their own supporting evidence and explicit attribution assumptions; a supplier's presence in a category, an advertised application, or a qualitative demand explanation does not establish a measured result.

2.4.1. Top-Down Approach

A top-down perspective serves as a scope and comparability check. A broader official or company business aggregate is relevant only to the extent that its included activities, geography, and period can be related to the studied chemical offerings; a general coatings or finishing business boundary is not interchangeable with Chemical Surface Treatment.

Any allocation from a broader aggregate requires support for the included activity and its exclusions. End-use industrial activity provides commercial context, not an automatic allocation to treatment chemicals, and unsupported proportional assumptions must not be presented as observed demand.

2.4.2. Bottom-Up Approach

A bottom-up perspective connects documented supplier participation and included chemical offerings to the accepted taxonomy. Its analytical role is to distinguish attributable surface-treatment chemical activity from a diversified company's broader business, without treating a product listing as proof of realized commercial activity.

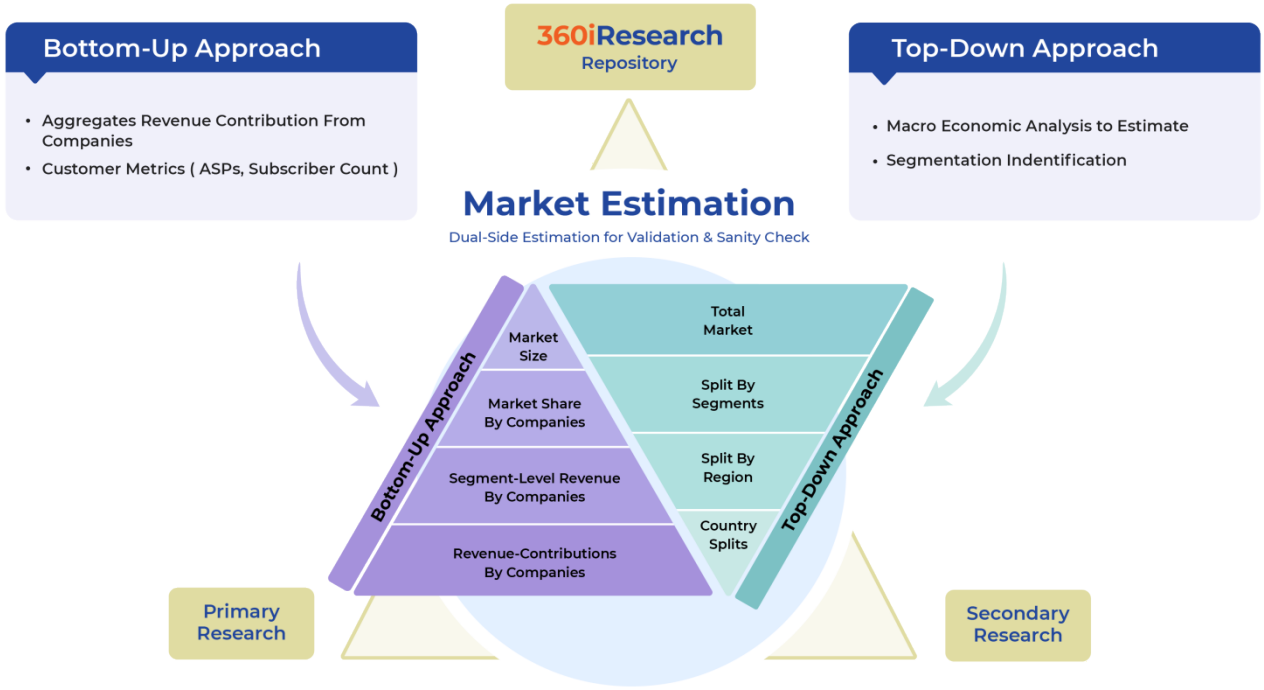
Successive manufacturer, distributor, and reseller relationships involving the same offering are not automatically separate market contributions. Any aggregation must make its chemical boundary and treatment of overlapping commercial roles explicit before supplier-level observations can support a consistent market interpretation.

2.5. Data Triangulation

Triangulation assesses whether accounts addressing the same claim refer to comparable offerings, legal entities, geographies, and periods. A supplier portfolio, regulatory permission, and buyer requirement may provide complementary information, but each answers a different commercial question and cannot substitute for the others.

Repeated accounts with a common underlying origin do not provide independent corroboration. Conflicting evidence is assessed for differences in authority, effective period, and scope, with uncertainty retained around the disputed business fact. Qualitative interpretations can challenge an explanation or classification, while numerical conclusions require their own evidentiary support.

Figure 4. Global Chemical Surface Treatment Market, Data Triangulation



2.6. Research Outcomes

The intended outcome is decision support that distinguishes included chemical offerings, documented supplier participation, buyer approval requirements, and commercially accessible supply routes. It should clarify which qualifications, rights, and service commitments are relevant before a buyer changes suppliers or a supplier commits to a customer or channel.

For suppliers and investors, the analysis is intended to support portfolio positioning, customer targeting, distribution and licensing choices, and capability assessment. Recommendations depend on the evidence for the particular offering, commercial relationship, jurisdiction, and application rather than on category membership alone.

2.7. Research Assumptions

- The accepted segmentation axes describe different attributes of the same chemical market. An offering associated with several functions, objectives, or applications must not be counted repeatedly merely because it appears in multiple analytical views.

- Commercial activity is attributed to the included chemical offering rather than automatically to an organization's entire portfolio. Conclusions about a diversified supplier depend on a defensible connection between its disclosed business and the studied offering.
- Products within the same category are candidates for comparison, not presumed substitutes. A switching conclusion depends on the relevant buyer's acceptance, application requirements, and applicable legal status.
- Buyer Operating Model and End-Use Industry are separate attributes. The party purchasing treatment chemicals is not assumed to be the party controlling approval for the finished article, so commercial access depends on identifying the relevant decision authority.

2.8. Research Limitations

- An announcement, advertised application, or regulatory authorization does not by itself demonstrate routine customer adoption or local commercial availability. Conclusions about participation and access require evidence specific to the offering and jurisdiction.
- A distributor listing or collaboration announcement does not establish exclusivity, territorial rights, continuing delivery obligations, or access to every customer. Channel choices remain conditional on the scope and effective terms of the relevant commercial relationship.
- A disclosure spanning broader chemicals, coatings, equipment, or finishing activities cannot by itself isolate the included surface-treatment chemical business. Comparisons must remain bounded to the activity that can be attributed to the study definition.
- Differences in reporting periods, corporate scope, geographic coverage, or currency presentation can prevent like-for-like comparison. Apparent differences must not be interpreted as changes in competitive capability without reconciling those boundaries.

3. Executive Summary

3.1. Introduction

Chemical Surface Treatment is a Global, specification-led chemical market in which competitive access depends on an accepted application and accountable supply relationship, not catalog breadth alone. Chemetall's industrial cleaning and conversion offerings and FUJIFILM's advanced-packaging polishing material address different purchasing functions; their shared market classification does not make them substitutes. Captive Finishing Operations and Contract Finishing Operations therefore need application-specific supplier comparisons.

Commercial access can depend on authorities beyond the chemical purchaser. Boeing Q020 requires approved processing sources for covered work, while REACH authorization governs specified uses of listed substances. These are bounded conditions, not universal approval rules. The principal choice is between a permitted, accepted incumbent and an alternative whose acceptance, delivery and support obligations are demonstrably suitable. Portfolio presence or a composition claim cannot independently establish that alternative's usability.

Sources & Evidence

1. Industry
   · Chemetall advertises Gardoclean cleaning products and Gardobond conversion-treatment offerings, establishing industrial chemical functions rather than account-specific interchangeability. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
2. Fujifilm Launches Advanced Packaging CMP Slurry
   · FUJIFILM's September xx.xx 2025 announcement identifies an advanced-packaging CMP polishing material, providing a function-specific semiconductor offering. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))
3. Terms and Conditions: Q020 - D1-4426 Approved Process Source
   · Boeing Q020, effective October xx.xx 2024, requires approved processing sources for applicable work, extends the requirement into covered subcontracts and preserves seller responsibility. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
4. Authorisation
   · REACH authorization concerns specified uses of Annex XIV substances and Commission decisions, establishing a legal-access condition distinct from customer acceptance. ([single-market-economy.ec.europa.eu](https://single-market-economy.ec.europa.eu/sectors/chemicals/reach/authorisation_en))

3.2. CXO Perspective

Supplier executives should allocate commercial resources to a named chemical function and account-specific acceptance route rather than portfolio-wide displacement. Qnity Electronics, Inc. discloses that customer material acceptance does not produce immediate or uniform commercial conversion, making acceptance and purchasing commitments distinct investment milestones. Incumbents can defend continuity through explicit fulfillment and support obligations; specialists can compete for an accepted function without replicating every adjacent service.

For captive and contract finishers, resource-efficiency propositions require a buyer-specific business case. Henkel's BONDERITE M-AD 2000A provides a concrete aluminum-anodizing alternative, but supplier-reported benefits do not establish the outcome at another facility. Procurement and facility cost owners should weigh relevant operating benefits against transition, support and interruption burdens, retaining an accepted incumbent when the proposed change is not commercially justified.

Resilience also requires distinguishing another seller from another technology principal. C&V's stated Química Sigma license illustrates why another producer need not represent independent technology. Unsettled legal identities and product-principal relationships limit which participants can be treated as independent fallbacks; product-specific confirmation should precede reliance on them.

Sources & Evidence

1. Terms and Conditions: Q020 - D1-4426 Approved Process Source
   · The applicable processing-source requirement provides a documented account-access condition supporting focused commercial commitments rather than catalog-based displacement assumptions. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
2. Less energy, more efficiency: Henkel optimizes aluminum anodizing with new additive Bonderite M-AD 2000A
   · Henkel's August xx.xx 2025 announcement presents BONDERITE M-AD 2000A for aluminum anodizers with supplier-reported resource-efficiency benefits; it does not establish another facility's business case. ([henkel.com](https://www.henkel.com/press-and-media/press-releases-and-kits/2025-xx.xx-xx.xx-less-energy-more-efficiency-henkel-optimizes-aluminum-anodizing-with-new-additive-bonderite-m-ad-2000a-xx.xx))
3. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   · Qnity distinguishes customer material acceptance from subsequent commercial conversion and states that conversion is neither immediate nor uniform, supporting conditional account-resource commitments. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
4. Fabricación de productos para tratamientos de superficies - CYV Industrias
   · C&V states that it manufactures named pretreatment products under QUIMICA SIGMA SRL license, illustrating separate producer and technology-principal roles. The undated disclosure does not establish current operative license terms. ([cyvindustrias.com](https://cyvindustrias.com/fabricacion-de-productos-para-tratamientos-de-superficies/))

3.3. New Revenue Opportunities

Assessed revenue openings center on identifiable chemical-selection events: resource-efficiency reviews by aluminum anodizers considering Henkel's BONDERITE M-AD 2000A; local access to specialist conversion chemistry through the CHEMEON-SurTec alliance; and program-specific polishing or deposition purchases involving FUJIFILM and Qnity. Each remains conditional on the buyer's accepted application and accountable destination supply; supplier-reported adoption or benefits do not transfer to another account. The Opportunity Mapping section details these routes. Thermal Management and Biological Interface Performance remain included objectives, but dedicated-entry commitments require clearer links among the chemical, purchasing counterparty and accepted application.

Sources & Evidence

1. Fujifilm Launches Advanced Packaging CMP Slurry
   · The announcement reports adoption by an unnamed semiconductor device manufacturer; this is supplier-reported adoption, not transferable acceptance at another buyer. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))
2. Less energy, more efficiency: Henkel optimizes aluminum anodizing with new additive Bonderite M-AD 2000A
   · The announcement identifies a concrete anodizing alternative, reports European availability and describes wider introduction as a rollout plan, supporting destination-specific opportunity conditions. ([henkel.com](https://www.henkel.com/press-and-media/press-releases-and-kits/2025-xx.xx-xx.xx-less-energy-more-efficiency-henkel-optimizes-aluminum-anodizing-with-new-additive-bonderite-m-ad-2000a-xx.xx))
3. Semiconductor Packaging Materials
   · Qnity advertises semiconductor-packaging copper-plating and under-bump-metallization materials, establishing deposition purchases distinct from CMP polishing. ([qnityelectronics.com](https://www.qnityelectronics.com/semiconductor-packaging-materials.html))
4. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   · The filing describes program-specific design wins and qualification-linked commercial conversion, supporting buyer-program conditions on electronics opportunities. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
5. CHEMEON and SurTec Form Strategic Alliance in Global Surface Technology Market
   · The March xx.xx 2026 CHEMEON-SurTec announcement establishes complementary commercial-access roles for specialist surface-treatment offerings, not account-specific fulfillment or acceptance. ([surtec.com](https://www.surtec.com/en/company/news/chemeon-and-surtec-form-strategic-alliance-in-global-surface-technology-market/))

3.4. Next-Generation Business Models

Commercial models extend beyond a separable chemical purchase. Element Solutions discloses an equipment sale associated with a multi-year chemistry agreement, while Henkel advertises BONDERITE Lineguard Process Control xx.xx monitoring and traceability. These are documented contractual and service propositions, not evidence of universal bundled adoption or exclusivity. Buyers should compare equivalent chemical, equipment and support scopes and agree record-access, renewal, transition and exit responsibilities. Integration can simplify accountability; separable commitments preserve flexibility but require additional coordination.

The CHEMEON-SurTec alliance illustrates a complementary channel model, combining SurTec's international infrastructure and local expertise with CHEMEON's U.S. access. Its commercial value remains conditional on product-and-destination responsibilities and customer acceptance. Partner-mediated access adds reach but introduces execution dependence; direct supply remains preferable where the principal can fulfill the account's obligations itself. These adjacent commitments shape chemical purchasing without enlarging the chemical-offering boundary.

Sources & Evidence

1. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   · Element Solutions discloses an equipment sale associated with a multi-year chemistry agreement, establishing a linked commercial commitment without proving universal exclusivity or bundled adoption. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
2. BONDERITE® Lineguard Process Control 200
   · Henkel advertises BONDERITE Lineguard Process Control xx.xx remote monitoring and data traceability, establishing an adjacent connected-support proposition rather than customer-specific adoption or contractual rights. ([next.henkel-adhesives.com](https://next.henkel-adhesives.com/us/en/services/iot/bonderite-lineguardx.html))
3. CHEMEON and SurTec Form Strategic Alliance in Global Surface Technology Market
   · SurTec contributes international infrastructure and local expertise, while CHEMEON contributes U.S. access. These stated contributions support a conditional partner-mediated channel option. ([surtec.com](https://www.surtec.com/en/company/news/chemeon-and-surtec-form-strategic-alliance-in-global-surface-technology-market/))

3.5. Industry Roadmap

During 2026-2027, prioritize continuity and confirmed commercial milestones. Surventis's July xx.xx 2026 launch retained Chemetall and announced unchanged products and technical teams, supporting account-responsibility checks rather than presumed chemical replacement. FUJIFILM's October xx.xx 2026 announcement schedules additional Mesa CMP facilities for operation in 2027. Buyers should distinguish confirmed existing supply from dependence on the addition and require documented operation and product-specific availability before treating it as a backup.

For 2028-2029, further program and geographic commitments should follow alignment of acceptance, purchasing decisions and destination obligations. Qnity's qualification-linked commercial conversion and Borer's country-specific assortment limits caution against equating elapsed time or worldwide representation with usable access. Applicable use-specific authorization conditions remain a separate legal checkpoint throughout these horizons.

For 2030-2032, longer-term renewals should establish record access, service-transition duties and the implications of changing chemical suppliers within integrated relationships. Where those rights remain unsettled, separable commitments preserve flexibility at the cost of additional coordination. The sequence is conditional on commercial and legal milestones, not a uniform replacement timetable.

Sources & Evidence

1. Surventis launches as an independent global leader in automotive coatings and surface treatment
   · Surventis launched independently on July xx.xx 2026, retained Chemetall among its brands and announced unchanged products and technical teams. This supports a continuity review, not an account-specific fulfillment guarantee. ([chemetall.com](https://www.chemetall.com/global/en/about-us/press-releases/2026/Surventis-launches-as-an-independent-global-leader))
2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   · The disclosed equipment-chemistry relationship supports conditional review of continuing obligations at renewal; individual transition and exit rights require the account agreement. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

3. BONDERITE® Lineguard Process Control 200

   · The advertised monitoring and traceability relationship supports conditional attention to record access and service continuity before longer-term renewal; the page does not establish individual customer rights. ([next.henkel-adhesives.com](https://next.henkel-adhesives.com/us/en/services/iot/bonderite-lineguardx.html))

4. Authorisation

   · The use-specific authorization framework supports retaining applicable legal permission as a separate checkpoint in conditional commercial commitments. ([single-market-economy.ec.europa.eu](https://single-market-economy.ec.europa.eu/sectors/chemicals/reach/authorisation_en))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Customer program decisions affect commercial conversion after material acceptance; elapsed time alone does not establish a purchasing relationship. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Specialists in cleaning and disinfection

   · Borer states that legal and licensing requirements reduce its product range in some countries, demonstrating why worldwide representation does not establish destination-specific assortment or supply commitments. ([borer.swiss](https://www.borer.swiss/en/company))

7. Fujifilm to Expand CMP Slurry Production Capacity in the United States | Fujifilm [Switzerland]

   · FUJIFILM's October xx.xx 2026 announcement identifies an existing Mesa production site and schedules additional CMP facilities for operation in 2027, rather than announcing completed operation or a buyer-specific supply obligation. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

4. Market Overview

4.1. Introduction

Chemical Surface Treatment is a specification-led market for chemical offerings used to prepare, finish, and protect surfaces. ▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ Product Function, Treatment Objective, Supply Form, and Chromium Chemistry describe different attributes of the offering; category membership does not establish interchangeability or permission for a particular application.

▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ The chemical purchaser may be a captive or contract finishing operation, while another party controls acceptance of the treated article. Equipment, software, finishing services, and downstream articles explain these relationships but are not substitutes for the studied chemical offering.

Figure 5. Global Chemical Surface Treatment Market Size, 2017-2040 (USD Million, Growth %)

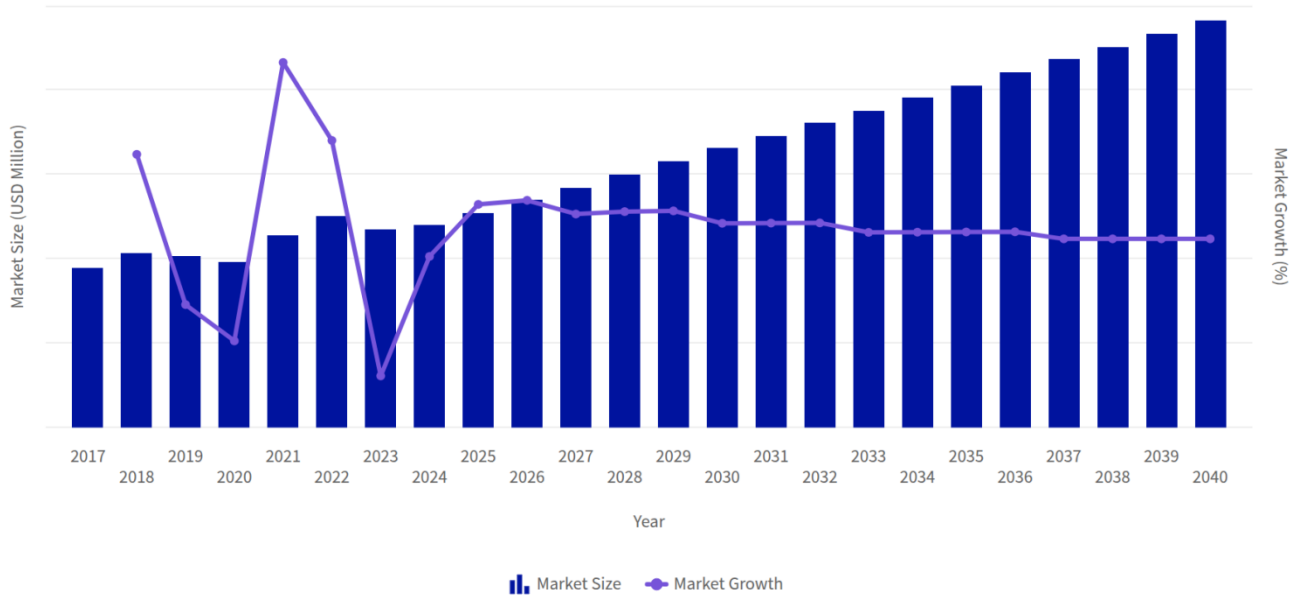


Table 2. Global Chemical Surface Treatment Market Size, 2017-2040 (USD Million, Growth %)

Metric	2017	2024	2025	2026	2027	2032	2040
Market Size (USD Million)	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Market Growth (%)	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Sources & Evidence

1. Industry

   · Chemetall advertises Gardoclean cleaners, Antox and Gardacid pickling offerings, Gardobond conversion coatings, Gardolene activating and passivating agents, and Oxsilan multi-metal pretreatment. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

2. General Metal Finishing

   · Atotech advertises functional and decorative general-metal-finishing offerings. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/))

3. Fujifilm Launches Advanced Packaging CMP Slurry

   · Fujifilm announced an advanced-packaging CMP slurry launch on September xx.xx 2025. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

4. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

5. Element Solutions Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

   · Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

   · Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

6. Henkel Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

7. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

8. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
9. Nihon Parkerizing Integrated Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))
10. Nippon Paint Holdings - Our Business Areas
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))
11. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
12. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))
13. Freudenberg Chemical Specialities - Business Portfolio and Numbers
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))
14. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))
15. Internal Revenue Service - Yearly Average Currency Exchange Rates
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

16. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25
    - Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
17. SEMI Materials Market Data Subscription - Coverage and Methodology
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))
18. Entegris, Inc. Form 10-K for the year ended December 31, 2025
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))
19. BASF Completes Acquisition of Chemetall - December 15, 2016
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

4.2. Key Growth Contribution

Buyer-led supply-chain requirements can reopen chemical sourcing without changing the chemical's purchased surface function. TSMC reports adopting aqueous ammonia derived from blue ammonia at Fab 14A in the fourth quarter of 2025, supported by carbon-footprint verification and procurement standardization. This demonstrates an adoption mechanism for Surface Cleanliness and Contamination Control: suppliers need attributable supply-chain documentation as well as an accepted chemical and accountable delivery arrangement. The opportunity is conditional on another buyer adopting comparable purchasing requirements; a

lower-carbon claim alone does not establish transferable acceptance or a commercially preferable replacement.

Figure 6. Global Chemical Surface Treatment Market, Key Growth Contribution, by Region, 2025-2032 (USD Million)

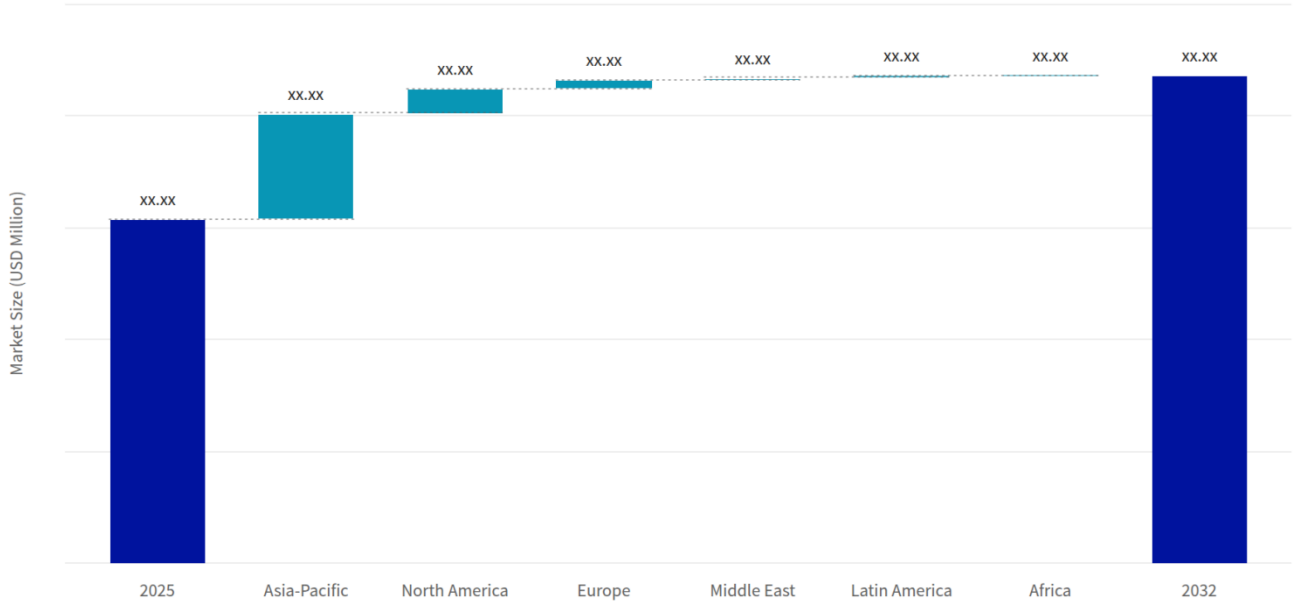


Figure 7. Global Chemical Surface Treatment Market, Key Growth Contribution, by Country, 2025-2032 (CAGR %)

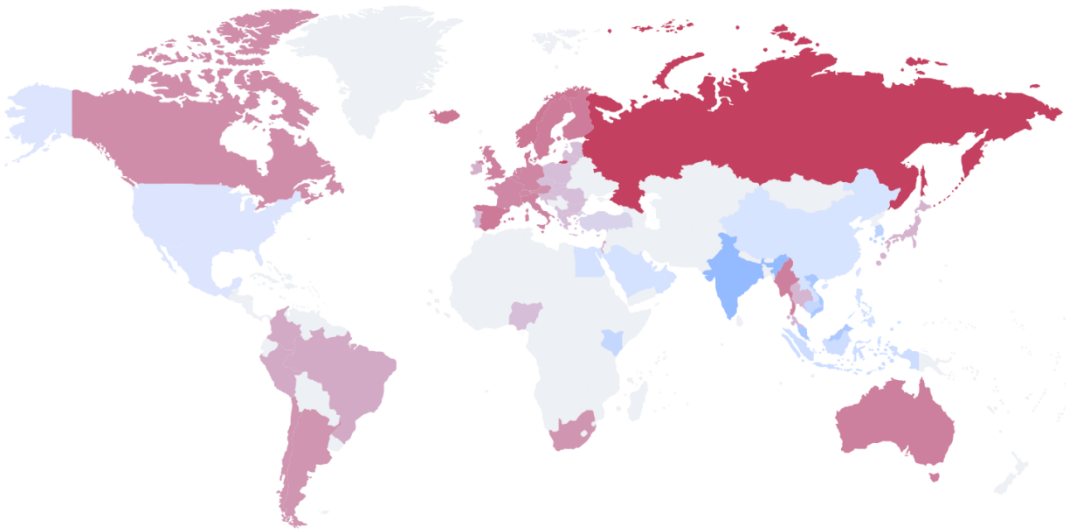


Table 3. Global Chemical Surface Treatment Market, Key Growth Contribution, 2025-2032

Scope	Leading Category	Added Market Size (USD Million)	Growth Share (%)	CAGR (%)
Buyer Operating Model	xx.xx	xx.xx	xx.xx	xx.xx
Chromium Chemistry	xx.xx	xx.xx	xx.xx	xx.xx
Country	xx.xx	xx.xx	xx.xx	xx.xx
End-Use Industry	xx.xx	xx.xx	xx.xx	xx.xx
Product Function	xx.xx	xx.xx	xx.xx	xx.xx
Region	xx.xx	xx.xx	xx.xx	xx.xx
Sales Channel	xx.xx	xx.xx	xx.xx	xx.xx
Substrate Material	xx.xx	xx.xx	xx.xx	xx.xx
Supply Form	xx.xx	xx.xx	xx.xx	xx.xx
Treatment Objective	xx.xx	xx.xx	xx.xx	xx.xx
Treatment Platform	xx.xx	xx.xx	xx.xx	xx.xx

Sources & Evidence

1. TSMC Introduces Blue Ammonia, a First for Taiwan's Semiconductor Industry
   - TSMC reports Fab 14A adoption of aqueous ammonia derived from blue ammonia in the fourth quarter of 2025, alongside footprint verification and procurement standardization. ([esg.tsmc.com](https://esg.tsmc.com/en-US/articles/xx.xx))
2. MKS Inc. Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

4. Henkel Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

5. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

6. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

7. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

8. Nippon Paint Holdings - Our Business Areas

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

9. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

10. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

    · Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

    · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

11. Freudenberg Chemical Specialities - Business Portfolio and Numbers

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

12. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

13. Internal Revenue Service - Yearly Average Currency Exchange Rates

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

14. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association's own category series supports the inherited semiconductor component and demand-cycle comparison, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association's own category series supports the inherited semiconductor component and demand-cycle comparison, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Slide xx.xx reports dated 2025 projections of USD xx.xx wet chemicals, USD xx.xx CMP materials and USD xx.xx ancillaries; only scope-adjusted chemical portions enter the inherited cohort. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%

15. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

16. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

17. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

18. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
19. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

20. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
21. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
22. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

23. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
24. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
25. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
26. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
27. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.

28. MKS Inc. Annual Report 2025

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

29. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

30. SurTec - Value-added Anodizing Portfolio

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

31. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
32. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
33. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

34. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

35. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

36. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

37. EASA - REACH and Aviation

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission. ([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption. ([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

38. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

39. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

40. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

41. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

42. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

43. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
44. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
45. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

46. U.S. Census Bureau - Monthly Wholesale Trade Definitions
· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
47. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
48. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024
· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

4.3. Industry Ecosystem & Value Chain Analysis

Value creation connects a chemical's commercial function to an accepted finished article, while value capture can depend on the surrounding supply relationship. MKS reports that its chemistry-equipment customers generally also choose its chemicals. ■■■■ ■■■■■■■■■■■■ ■■ ■■■■■■■■■■■ ■■■■■■■ ■■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■ ■■■ ■ ■■■■■■■■■ ■■■■■■■■■■■■■■■ ■■■■■■■■■■■ ■■■■■■ ■■■■■■ ■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■■

RESEARCH SAMPLE REPORT

[redacted]

The finishing operation is a control point between chemical supply and downstream acceptance. PRI recognizes both captive and noncaptive suppliers within Nadcap, while subscribing original equipment manufacturers establish program requirements. [redacted]

Sources & Evidence

1. MKS Inc. Annual Report 2025
   - MKS reports that the majority of its chemistry-equipment customers also elect to use its chemicals. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
2. Participate in Nadcap
   - PRI defines Nadcap suppliers as captive or noncaptive operations and states that subscribing OEM members establish program requirements. ([p-r-i.org](https://www.p-r-i.org/nadcap/participate))

4.3.1. Supply-Side Analysis

Supplier capability includes the documented service relationship as well as the named chemical offering. [redacted] Buyers should establish the responsible local entity and service scope; suppliers without comparable coverage face a commercial fulfillment question even when their product function matches the requirement.

[redacted] Customers should verify contracting entities, delivery obligations, and applicable recognition rather than assume either disruption or automatic contractual continuity. Keeping the established offering may avoid a product change, while updated account documentation can still be necessary.

Sources & Evidence

1. General Metal Finishing
   - Atotech describes a global TechCenter support network and lists regional sales, support, and production locations. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/))
2. Surventis launches as an independent global leader in automotive coatings and surface treatment
   - Surventis announced its independent launch on July xx.xx 2026, retained Chemetall among its brands, and stated that products and technical teams would continue. ([chemetall.com](https://www.chemetall.com/global/en/about-us/press-releases/2026/Surventis-launches-as-an-independent-global-leader))

4.3.2. Demand-Side Analysis

Chemical purchasing and article approval are separate commercial authorities. Boeing's Q020 clause requires applicable sellers and subcontractors to use approved processing sources and retain conformity documentation. ▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪

Delivery reliability is a purchasing condition, not merely an after-sales benefit. BASF's September 2025 announcement identifies Chemetall supply of Ardrox corrosion-protection products, cleaners, and pretreatment technologies to Airbus sites and subcontractors, alongside a supplier-quality program that reviews delivery and quality performance. ▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪

Sources & Evidence

1. Terms and Conditions: Q020 - D1-4426 Approved Process Source
   - Q020, effective October xx.xx 2024, requires applicable sellers and subcontractors to use approved processors and retain conformity documentation. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
2. Chemetall receives the Airbus SQIP 2025 award for its 2024 performance
   - The September xx.xx 2025 announcement identifies Ardrox corrosion-protection, cleaner, and pretreatment supply to Airbus sites and subcontractors and describes review of delivery and quality performance. ([basf.com](https://www.basf.com/global/en/media/news-releases/2025/xx.xx/p-xx.xx-xx.xx))

4.3.3. Stakeholder Analysis

Approval, distribution, and application networks confer different kinds of access. ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ Procurement should preserve these distinctions when identifying the party responsible for chemicals, finishing work, and customer conformity.

Environmental authorities and employees expose the facility operator to obligations that cannot be delegated by purchasing a branded offering. EPA connects metal-finishing discharge requirements to facility permits or control mechanisms, while OSHA assigns chromium(VI) hazard-communication responsibilities across relevant supply-chain participants and employers. ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪ ▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪

Sources & Evidence

1. Terms and Conditions: Q020 - D1-4426 Approved Process Source
   · Processor approval does not relieve the seller of purchase-contract obligations. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
2. Find a distributor
   · Henkel's distributor locator includes Industrial Surface Treatments. ([next.henkel-adhesives.com](https://next.henkel-adhesives.com/us/en/support/find-a-distributor.html))
3. XMAPP Approved Applicators Request
   · MacDermid Enthone offers a list of approved supply-chain applicators for delivering parts to OEMs. ([industrial.macdermidenthone.cn](https://industrial.macdermidenthone.cn/quality-performance-systems/xmapp/xmapp-approved-applicators-request))
4. Metal Finishing Effluent Guidelines
   · EPA incorporates applicable metal-finishing requirements into direct-discharge permits or indirect-discharge control mechanisms. ([epa.gov](https://www.epa.gov/eg/metal-finishing-effluent-guidelines))
5. 1910.1026 - Chromium (VI)
   · The chromium(VI) standard assigns hazard-communication duties to relevant manufacturers, importers, distributors, and employers, with employee-protection obligations for covered employers. ([osha.gov](https://www.osha.gov/laws-regs/regulations/standardnumber/1910/xx.xx))

4.4. Market Dynamics

[illegible] This is a company-specific observation, not a uniform Global market trajectory. Suppliers must distinguish account continuity from discretionary changes tied to customer budgets and program decisions.

[illegible] Useful commercial indicators are therefore changes in accepted-source status, purchase commitments, and delivery-performance standing. Product announcements alone cannot settle whether a selection event has become a continuing supply relationship.

Sources & Evidence

1. MKS Inc. Annual Report 2025
   · The disclosed equipment-chemistry association supports an installed-relationship mechanism without establishing contractual exclusivity. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
2. Participate in Nadcap
   · Accredited suppliers enter a Qualified Manufacturers List, and subscribing OEM members grant and accept accreditation. ([p-r-i.org](https://www.p-r-i.org/nadcap/participate))

3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   · The 2025 filing describes subdued European automotive, construction, and general industrial activity alongside increased Asian automotive demand. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

4.4.1. Key Drivers

4.4.1.1. Compliance-led review of chemical alternatives

[redacted] Buyers must distinguish Hexavalent Chromium-Free from Chromium-Free and verify the applicable legal and customer requirements. Adoption becomes defensible when written acceptance and jurisdiction-specific permission align; otherwise, an authorized incumbent route may remain commercially necessary.

Sources & Evidence

1. Questions & Answers: Towards a Restriction of Cr(VI) Substances under REACH - Version 4
   · Commission services describe a proposed chromium(VI) restriction initiative and state that existing authorization arrangements remain applicable until replacement measures take effect. ([single-market-economy.ec.europa.eu](https://single-market-economy.ec.europa.eu/document/download/152ceb7d-1d42-4cba-89fe-e37496260c96_en?filename=Q%26A+No+2_Potential+restriction+of+Cr%28VI%xx.xx+substances_v2.pdf))
2. Functional chrome coatings
   · Atotech advertises BluCr trivalent chromium and Fumalock non-PFAS fume suppressant, which address distinct commercial classifications. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/))

4.4.1.2. Mixed-material specifications create selection events

Changes in vehicle material specifications can create chemical-selection events rather than simple replacement demand. Henkel's documented 2017 collaboration with Audi concerned pretreatment of multi-metal bodies, and its advertised automotive portfolio includes mixed-metal alternatives. [redacted]

Sources & Evidence

1. Henkel patented two-step process for auto body surface treatment at Audi
   · Henkel's October xx.xx 2017 announcement documents cooperation with Audi on multi-metal automotive pretreatment. ([henkel.com](https://www.henkel.com/resource/blob/xx.xx/7f07d71bc2a04250d25d7b9932a8ee2d/data/2017-xx.xx-xx.xx-press-release-henkel-patented-two-step-process-for-auto-body-surface-treatment-at-audi.pdf))
2. Paint shop solutions for the vehicle body
   · Henkel advertises automotive pretreatment offerings addressing mixed-metal substrates. ([next.henkel-adhesives.com](https://next.henkel-adhesives.com/us/en/industries/automotive/automotive-vehicle-body/paint-shop.html))

4.4.1.3. Application-specific semiconductor materials requirements

Semiconductor packaging requirements create a purchasing rationale for application-specific Polishing and Brightening Agents. ■■■■■■■■■■ ■■■■■■■■■ ■■■ ■■■■ ■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■ ■■ ■■■ ■■■■■■■■■■■■■■■■■■ ■■■ ■■■■■■ ■■ ■■ ■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■ ■■■■■■■■■■■■ ■■■■ ■■■■■■■■■■■■■■■■ ■■■■■■■ ■■■■ ■■■ ■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■ ■■■■■■■ ■■■■■■■■■■■ ■■ ■■■■■■■■■■■■■■■■■■ ■■■■ ■■■■■■■■■■■■■■■■■■■■ ■■■■■■■■■ Commitments should depend on the target buyer's material acceptance and accountable supply arrangement.

Sources & Evidence

1. Fujifilm Launches Advanced Packaging CMP Slurry
   - The September xx.xx 2025 announcement explicitly reports adoption of the advanced-packaging CMP slurry by an unnamed semiconductor device manufacturer.

4.4.1.4. Resource-efficiency propositions influence purchasing

Resource and maintenance economics can motivate a chemical review even when the required surface outcome is unchanged. ■■■■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■■ ■■■■■ ■■ ■■■■■■■ ■■■■ ■■■■ ■■■■■■■■ ■■■■■■ ■■■ ■■■■■■■■■■■■■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■ ■■■■■ ■■■■■■■■■■■■■■■■■■■■ ■■■■■■■■■■■■■ ■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■■■■ ■■■ ■■■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■ ■■ ■■■■■ ■■■■■■■ Procurement should consider them when the facility's relevant costs and customer acceptance support the change, balancing potential operating benefits against transition and support obligations.

Sources & Evidence

1. Paint shop solutions for the vehicle body
   - Henkel presents resource-efficiency propositions for BONDERITE automotive pretreatment alternatives. ([next.henkel-adhesives.com](https://next.henkel-adhesives.com/us/en/industries/automotive/automotive-vehicle-body/paint-shop.html))
2. Less energy, more efficiency: Henkel optimizes aluminum anodizing with new additive Bonderite M-AD 2000A
   - Henkel introduced BONDERITE M-AD 2000A on August xx.xx 2025, with claimed energy and material-efficiency benefits for aluminum anodizing. ([henkel.com](https://www.henkel.com/press-and-media/press-releases-and-kits/2025-xx-xx-xx-xx-less-energy-more-efficiency-henkel-optimizes-aluminum-anodizing-with-new-additive-bonderite-m-ad-2000a-xx-xx))

4.4.2. Key Restraints

4.4.2.1. Customer approval constrains immediate switching

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Sources & Evidence

1. Terms and Conditions: Q020 - D1-4426 Approved Process Source
   · The approved-source clause must be included in applicable subcontracts. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

4.4.2.2. Facility compliance obligations remain with the buyer

Facility-level wastewater obligations constrain purchasing beyond the chemical's advertised function. ■■■ ■■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■ ■■■■■■■■ ■■ ■■■■■ ■■■■■■■■ ■■■■■■■■■■■ ■■■■ ■■■■■■■■■■■■ ■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■ ■ ■■■■■■■■■■■ ■■■■■■■■ ■■■■ ■■■ ■■■■■■ ■■■■■ ■■■■■■■■■■■ ■■■■■■ ■■■■■■■■ ■■ ■■ ■■■■■■■■ ■■■■■■■■■■■■■■■ ■■■■■■■■■■■■ Captive and contract finishing buyers must connect chemical selection to their own compliance position, balancing a change against continued fulfillment under the existing permitted arrangement.

Sources & Evidence

1. Metal Finishing Effluent Guidelines
   · EPA distinguishes covered metal-finishing facilities from certain facilities governed by the related electroplating category. ([epa.gov](https://www.epa.gov/eg/metal-finishing-effluent-guidelines))

4.4.3. Key Opportunities

4.4.3.1. Accepted alternatives for specific compliance requirements

A purchasing requirement excluding hexavalent chromium can open consideration of named trivalent conversion offerings, but not automatically of Chromium-Free offerings. ■■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■■■ An already permitted and accepted incumbent remains the alternative when the proposed route does not satisfy those conditions.

Sources & Evidence

1. Terms and Conditions: Q020 - D1-4426 Approved Process Source
   · Boeing Q020 requires approved processing sources for covered work and preserves seller responsibility, supporting account-specific entry conditions. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
2. Authorisation
   · REACH authorization concerns specified uses of listed substances and Commission decisions, not permission for an entire treatment category. ([single-market-economy.ec.europa.eu](https://single-market-economy.ec.europa.eu/sectors/chemicals/reach/authorisation_en))
3. CHEMEON and SurTec Form Strategic Alliance in Global Surface Technology Market
   · The alliance identifies CHEMEON and SurTec trivalent conversion offerings; this does not establish a Chromium-Free proposition or customer-specific acceptance. ([surtec.com](https://www.surtec.com/en/company/news/chemeon-and-surtec-form-strategic-alliance-in-global-surface-technology-market/))

4.4.3.2. Account-specific anodizing resource economics

Aluminum anodizers with relevant resource-cost exposure can evaluate the purchasing case for BONDERITE M-AD 2000A. Henkel's announcement distinguishes European availability from planned wider introduction. ■■■ ■■■■■■■■■■■ ■■■■■■■ ■■ ■■■■■■■■■■■■■■■■■■■■ ■■■■■■■ ■■■■■■■■ ■■■ ■■■ ■ ■■■■■■■■■■■■■■■ ■■■■■■■■ ■■■■■ ■■■■■■■ ■■■■ ■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■■ ■■ ■■■■■■■ ■■■■■■■■

Sources & Evidence

1. Less energy, more efficiency: Henkel optimizes aluminum anodizing with new additive Bonderite M-AD 2000A
   · Henkel's August xx.xx 2025 announcement presents BONDERITE M-AD 2000A resource-efficiency claims, European availability and planned wider introduction. ([henkel.com](https://www.henkel.com/press-and-media/press-releases-and-kits/2025-xx.xx-xx.xx-less-energy-more-efficiency-henkel-optimizes-aluminum-anodizing-with-new-additive-bonderite-m-ad-2000a-xx.xx))

4.4.3.3. Local access to specialist conversion chemistry

The CHEMEON-SurTec alliance creates a concrete candidate for specialist chemical access through complementary commercial organizations. ■■■■■■■ ■■■■■■■ ■■ ■■■ ■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■ ■■■■■■ ■■■ ■■■■■ ■■■■■■■ ■■■■■■■■■■ ■■■■■ ■■■■■■■■ The route addresses commercial reach; it does not independently confer customer approval or establish an independent technology source.

Sources & Evidence

1. CHEMEON and SurTec Form Strategic Alliance in Global Surface Technology Market
   · The March xx.xx 2026 alliance assigns complementary U.S. and international access roles rather than establishing an acquisition. ([surtec.com](https://www.surtec.com/en/company/news/chemeon-and-surtec-form-strategic-alliance-in-global-surface-technology-market/))

4.4.3.4. Program-specific semiconductor chemical supply

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Sources & Evidence

1. Fujifilm Launches Advanced Packaging CMP Slurry
   · FUJIFILM's September xx.xx 2025 announcement reports advanced-packaging CMP adoption by an unnamed semiconductor device manufacturer. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))
2. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   · Qnity describes program-specific material acceptance and qualification-linked commercial conversion rather than immediate purchasing after introduction. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

4.4.4. Key Challenges

4.4.4.1. Coordinating chemical changes with customer acceptance

Replacing a restricted or undesirable chemistry requires coordination between the chemical purchaser and the authority governing the finished article. Atotech's advertised alternatives establish candidates, while Boeing's purchase clause demonstrates that processing-source requirements can remain contractually binding. [redacted]

Sources & Evidence

1. Terms and Conditions: Q020 - D1-4426 Approved Process Source
   - The clause establishes a customer-controlled source requirement that remains relevant to a proposed commercial change. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
2. Functional chrome coatings
   - The named offerings establish advertised alternatives, not customer-specific acceptance. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/))

4.4.4.2. Assigning channel and service responsibilities

An intermediary relationship does not establish every commercial obligation needed to serve an account. [redacted] Intermediation can provide access, while unclear obligations can leave the buyer without an accountable fulfillment party.

Sources & Evidence

1. Find a distributor
   - The locator provides distributor discovery but does not state individual exclusivity, territory, stock, or service obligations. ([next.henkel-adhesives.com](https://next.henkel-adhesives.com/us/en/support/find-a-distributor.html))

4.4.4.3. Converting localization announcements into accepted supply

[redacted] The commercial question is whether the relevant surface-treatment material reaches buyer acceptance under a binding supply arrangement. Local purchasing commitments and commencement of accepted supply would distinguish execution from intent; reliance before those events exposes buyers and partners to schedule uncertainty.

Sources & Evidence

1. Fujifilm and Tata Electronics Announce Strategic Partnership to Accelerate Semiconductor Materials Ecosystem in India
   · The September 2026 announcement describes an MoU for materials supporting Tata's upcoming Dholera fabrication facility and a planned local Fujifilm materials plant. ([fujifilm.com](https://www.fujifilm.com/in/en/news/fujifilm-and-tata-electronics-announce-strategic-partnership-to-accelerate-semicondutor-ecosystem-in-india))

4.5. Porter’s Five Forces Analysis

Rivalry is application-specific rather than a contest among universally interchangeable chemicals. ■■■■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■■ ■■■■ ■■■■■■■■■■■■■ ■■■■■■ ■■■■■■■■■ ■■■■■■■■■ ■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■ ■■■■■■ ■■■■■■■■■ ■■■■■■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■ ■■■■■■■ ■■■■ ■■■■■■■ ■■■ ■ ■■■■■■■■■■ ■■■■■■■■ Portfolio breadth can simplify purchasing, whereas a specialist may compete on an accepted application and local support rather than matching an incumbent's entire catalog.

Buyer power and entry barriers arise at different points. ■■■■■■■■■ ■■■■■■ ■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■ ■■■■■■■ ■■■■■■■■■■■■■■■ ■■■■■■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■■■■ ■■■■■ ■■■ ■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■■■■ ■■■■■■■■ ■■■■■■■ ■■■■■■■■■■■ ■ ■■■■■■■ ■■■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■ ■■ ■■ ■■■■■■■ ■■■ ■■■■■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■ ■■ ■■■■■■■■■ ■■■■■■■■ Qualification restricts immediate switching, but it does not eliminate buyer leverage when another accepted source exists.

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■■■■■■■■■■■■ ■■ ■■■■■■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■ ■■■■■■■■ ■■ ■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■ ■■■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■ ■■■■■■■■ ■■■■■ ■■■■■■■■■ ■■■ ■■■■■ ■■■■■■■■ ■■ ■■■■■■■■■ ■■■■■■■■■■■■ ■■■ ■■■■■■■■■ ■■■■■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■ Those offerings do not establish replacement of deposition, passivation, or every cleaning application. Buyers must compare the accepted article requirement, service obligations, and consequences of changing the installed relationship before treating a substitute as commercially equivalent.

Sources & Evidence

1. Industry
   · Oxsilan is advertised for multi-metal pretreatment, establishing a candidate commercial function rather than customer-specific equivalence. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

2. General Metal Finishing
   - The advertised TechCenter network establishes an organized supplier-support footprint, not an account-specific service guarantee. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/))
3. MKS Inc. Annual Report 2025
   - MKS describes customers choosing its chemistry alongside its equipment, distinguishing observed association from compulsory sourcing. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
4. Participate in Nadcap
   - Nadcap's industry-managed recognition mechanism connects aerospace supplier access with subscribing OEM requirements. ([p-r-i.org](https://www.p-r-i.org/nadcap/participate))
5. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Element Solutions states that most raw materials are obtainable from multiple conformant sources. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
6. Functional chrome coatings
   - BluCr is described as trivalent chromium chemistry; that designation is distinct from Chromium-Free. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/))
7. Paint shop solutions for the vehicle body
   - BONDERITE Thin Film is advertised as an automotive pretreatment alternative, establishing portfolio overlap rather than customer equivalence. ([next.henkel-adhesives.com](https://next.henkel-adhesives.com/us/en/industries/automotive/automotive-vehicle-body/paint-shop.html))
8. Surface processing with the laser
   - TRUMPF markets laser cleaning and paint-removal applications, establishing adjacent alternatives for selected surface-preparation functions. ([trumpf.com](https://www.trumpf.com/en_INT/solutions/applications/surface-processing-with-the-laser/))

4.6. PESTLE Analysis

Trade measures can change sourcing economics without changing treatment requirements. ▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ Importers must distinguish Commerce determinations from duty orders dependent on separate injury decisions and verify the written merchandise scope before changing supply arrangements.

Worker protection and environmental obligations influence purchasing authority. OSHA's chromium(VI) standard assigns hazard-communication and employee-protection responsibilities to covered employers and relevant chemical supply-chain participants. ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪

European regulatory transition requires careful separation of policy direction from operative permission. The European Commission services' December 2025 questions and answers describe a proposed move toward restrictions on certain chromium(VI) substances and state that existing authorization arrangements remain applicable until the replacement framework

takes effect. ■■■ ■■■■■■■■ ■■ ■■■■■■■■■■ ■■■ ■■■■ ■■■ ■■■■■■■■■ ■■ ■■■■■■■ ■■■■■■■ ■■■■ ■■■■■ ■■■■■ ■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■■ ■■■■■■■■■ ■■■■■■■■■■■■■ ■■■■■■■■■■■■■ ■ ■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■

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Sources & Evidence

1. Metal Finishing Effluent Guidelines
   · The framework links discharge obligations to the covered facility's permits or other control mechanisms. ([epa.gov](https://www.epa.gov/eg/metal-finishing-effluent-guidelines))
2. 1910.1026 - Chromium (VI)
   · Covered employers retain employee-protection and hazard-communication responsibilities. ([osha.gov](https://www.osha.gov/laws-regs/regulations/standardnumber/1910/xx.xx))
3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   · The filing describes patents, trade secrets, trademarks, and contractual protection and states that many proprietary products are not patented. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
4. Questions & Answers: Towards a Restriction of Cr(VI) Substances under REACH - Version 4
   · The December xx.xx 2025 document is explicitly nonbinding and distinguishes proposed restrictions from the existing framework. ([single-market-economy.ec.europa.eu](https://single-market-economy.ec.europa.eu/document/download/152ceb7d-1d42-4cba-89fe-e37496260c96_en?filename=Q%26A+No+2_Potential+restriction+of+Cr%28VI%xx.xx+substances_v2.pdf))
5. BONDERITE LineguardX services
   · Henkel advertises BONDERITE Process Control xx.xx for connected monitoring and traceability; the page does not establish individual customer data rights. ([next.henkel-adhesives.com](https://next.henkel-adhesives.com/ch/en/services/iot/bonderite-lineguardx.html))
6. Chromium Trioxide From India: Final Affirmative Determination of Sales at Less Than Fair Value
   · Commerce's chromium-trioxide determination for India is applicable October xx.xx 2026; it includes deposit instructions and distinguishes a determination from an order dependent on an injury decision. ([govinfo.gov](https://www.govinfo.gov/content/pkg/FR-2026-xx.xx-xx.xx/pdf/2026-xx.xx.pdf))
7. Chromium Trioxide From the Republic of Türkiye: Final Affirmative Determination of Sales at Less Than Fair Value
   · Commerce's chromium-trioxide determination for Türkiye is applicable October xx.xx 2026; it continues deposit and liquidation instructions while distinguishing the subsequent injury and order stages. ([govinfo.gov](https://www.govinfo.gov/content/pkg/FR-2026-xx.xx-xx.xx/pdf/2026-xx.xx.pdf))

4.7. Market Outlook

The 2026-2032 outlook is best understood as a sequence of account-specific selection opportunities, not a uniform replacement cycle. ■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■ ■■■ ■■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■ ■■■■■■ ■■■■■■■■■ ■■■■■■ ■■■■■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■ ■■■■■■■■■■ ■■■■■■■ ■■■ ■■■■■■■■■■■■ ■■■■ ■■■■ ■■■■■■■■■■■

[redacted] Qnity's disclosed qualification-linked commercial conversion provides a separate counterforce: even an accepted material can precede a continuing purchasing relationship.

The constructive scenario is that applicable legal decisions, buyer acceptance and enforceable supply obligations align, allowing a supplier to capture a defined application. The continuity scenario is that those events occur at different times, leaving an accepted incumbent preferable while alternatives remain under commercial review. [redacted]

Sources & Evidence

1. Authorisation
   · Use-specific authorization provides a legal-access checkpoint distinct from customer acceptance and commercial supply commitments. ([single-market-economy.ec.europa.eu](https://single-market-economy.ec.europa.eu/sectors/chemicals/reach/authorisation_en))
2. The Commission advances work on restrictions of hazardous chemical substances
   · The July xx.xx 2026 Commission announcement describes continuing chromium(VI) and PFAS restriction initiatives rather than establishing a blanket prohibition. ([single-market-economy.ec.europa.eu](https://single-market-economy.ec.europa.eu/news/commission-advances-work-restrictions-hazardous-chemical-substances-2026-xx-xx-02_en?prefLang=cs))
3. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   · The filing describes non-immediate, uneven conversion of customer design wins, supporting milestone-sensitive outlook scenarios. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx-xx-xx-xx-xx-xx/xx-xx-xx-xx-xx-xx.pdf))

4.7.1. Near-Term Market Outlook (0-2 Years)

During 2026-2027, continuity review is more defensible than assuming that a corporate transition forces chemical replacement. Surventis's July xx.xx 2026 launch announcement retained Chemetall and stated that products and technical teams would continue. [redacted]

Near-term semiconductor sourcing should also separate established arrangements from planned additions. FUJIFILM's October xx.xx 2026 announcement schedules additional Mesa CMP facilities to begin operation in 2027. [redacted]

Sources & Evidence

1. Surventis launches as an independent global leader in automotive coatings and surface treatment
   · Surventis's July xx.xx 2026 launch announcement retains Chemetall and states continuity of products, technologies, brands and technical teams. ([chemetall.com](https://www.chemetall.com/global/en/about-us/press-releases/2026/Surventis-launches-as-an-independent-global-leader))
2. Fujifilm to Expand CMP Slurry Production Capacity in the United States | Fujifilm [Switzerland]
   · FUJIFILM's October xx.xx 2026 announcement schedules additional Mesa CMP facilities to begin operation in 2027, rather than reporting completion. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

4.7.2. Medium-Term Market Outlook (3-5 Years)

For 2028-2029, commercial assessment should shift from announced introductions to repeatable program and destination coverage. Qnity describes customer qualification extending across multiple quarters and non-immediate commercial conversion. ■■■ ■■■■■■■ ■■ ■■■■ ■■■■ ■■■ ■■■■■■ ■■■■■■■■■ ■ ■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■■■■ ■■■■ ■■■■■■■■■■ ■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■ ■■■■■■■■■■■■ ■■■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■ ■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■ ■■■■ ■ ■■■■■■■■■■■ ■■■■■■■ ■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■■

Geographic rollout requires a different confirmation. ■■■■■■■ ■■■■■■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■ ■■■■■■■■■■■■ ■■■■ ■■■■■■■■■ ■■■■■■■■■■■■■■ ■■■ ■■■■■■■ ■■■■ ■■■■■■■■■■ ■■■■■■■ ■■■■■■■■■ ■■■■■■■■■ ■■■■■■ ■■■■■■ ■■■■■■■■■■■■ ■■ ■■■■■■ ■■■■■■■■ ■■■■ ■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■ ■■■ ■■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■■■■ ■■■■■ ■■■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■ ■■■■■■■■■■■■■■■ ■■■■■■ ■ ■■■■■■■■ ■■■■■■■ ■■■■■■■■■■■■ Neither a regional office nor an earlier rollout announcement should be treated as proof that these conditions will have been resolved by this horizon.

Sources & Evidence

1. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   · Qualification can extend across multiple quarters, and customer program decisions affect the timing of commercial conversion. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
2. Specialists in cleaning and disinfection
   · Borer distinguishes direct and partner channels and warns that legal and licensing requirements reduce its assortment in some countries. ([borer.swiss](https://www.borer.swiss/en/company))

4.7.3. Long-Term Market Outlook (5-10 Years)

For 2030-2032, the strategic choice is whether the chemical remains a separable purchase or forms part of a continuing support relationship. Element Solutions' disclosed multi-year chemistry arrangement and Henkel's advertised connected-monitoring offering establish commercial precedents, not proof that all buyers will accept bundled dependence. ■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■ ■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■■ ■ ■■■■■■■■■■ ■■■■■■■ ■ ■■■■■■■■ ■■■■■■■■■■■ ■■■■■ ■■■ ■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■ ■■■■■■■■ ■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■ ■■■■■■■■■■■

Longer-term commitments should therefore turn on rights and continuity as well as product acceptance. Buyers evaluating integrated services should obtain usable record access, service-transition responsibilities and the implications of a chemical-supplier change before renewal. ■■■■■■■■■ ■■■■■■ ■■■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■■■■ ■■■■ ■■■■ ■■ ■■■■■■■ ■■■■■■■■ ■■■■■■■■■ ■■■■■■■■ ■■■■■■■■ ■■■■■■■ ■■■■■■■■■ ■■■■■■■■ ■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■ ■■■ ■■■■■■■■■ ■■■■■■■ ■■■■■■■■■ ■■■■■■■ ■ ■■■■■■■■ ■■■■■ ■■■■■ ■■■■■■■■■■ ■■■■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■ ■■■ ■■■■ ■■ ■■■■■■■■■■ ■■■■■■■■■■■■■

Sources & Evidence

1. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   · Element Solutions discloses a multi-year chemistry agreement associated with an equipment sale, supporting separate review of linked commercial obligations. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
2. BONDERITE® Lineguard Process Control 200
   · Henkel advertises BONDERITE Lineguard Process Control xx.xx remote monitoring and traceability; the page does not establish individual data-access or exit rights. ([next.henkel-adhesives.com](https://next.henkel-adhesives.com/us/en/services/iot/bonderite-lineguardx.html))

4.8. Go-to-Market Strategy

A new entrant should target a defined chemical purchase and identify the paying operation, acceptance authority and destination before funding broad account coverage. ■■■ ■■■■ ■■■■■■■■ ■■■■■■ ■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■ ■ ■■■■■■■■ ■■■■■ ■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■ ■■■■■ ■■■■■■■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■ ■■■ ■■■ ■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■ ■■■■■ ■■■ ■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■■■■■■■■■ An incumbent should defend an existing relationship through explicit continuity commitments, while a specialist should pursue the accepted function it can actually serve rather than promise portfolio-wide replacement.

■■■ ■■■■■■■■■■■■■■■■ ■■■■■■ ■■■■■ ■■■ ■■■■■■■■ ■■■■■■ ■ ■■■■■■■■■■■ ■■■■■■■■■■■■■■■■■■■ ■■■■ ■■ ■■■ ■■■■■■■■■■■■■■ ■■■■■■■■■ ■■■ ■■■■■■ ■■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■■ ■■■■■■■■■■■■■■ ■■■ ■■■■■ ■■■■■■■■■ ■■■ ■■■■■■■■■ ■■■■■ ■■■■■■■■■■ ■■■■■ ■■■■■■ ■■■■■■■■■■ ■■ ■ ■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■ ■■■■■■■■■ ■■■■■ ■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■■■■ ■■■■■ ■■■■■■■■ ■■■■■ ■■■ ■■■■■■■■■■■ ■■■■■■ The chemical principal still needs to meet its agreed product and documentation obligations, and customer acceptance remains separate. Direct engagement is preferable when the supplier can meet those obligations itself; an alliance announcement is not a substitute for an effective account arrangement.

■■ ■■■ ■■■■■ ■■ ■■■■■■ ■■■■■■■■ ■■ ■ ■■■■■■■■■■ ■■■■■■■ ■■ ■■ ■■■■■■■■■■ ■■ ■■■■■■ ■ ■■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■ ■■■■■ ■■■■■■■■ ■■■■■ ■■■■■■■■ ■■■■■ ■■■■■■■■■ ■■■ ■■■ ■■■■■■■■ ■■■■■■■■■ ■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■ ■■■■■■■■■ ■■ ■■■■■■■■ ■■■■■■■■ A prospective license-dependent business should defer commitment until the principal confirms operative product, territory, duration and commercial responsibility. Confirmed branded supply from Sigma or its applicable channel is a materially different alternative: it

avoids assuming new technology rights, although it still requires product-specific fulfillment terms.

Commercial proposals should separate the chemical commitment from optional equipment, monitoring and support obligations. Element Solutions' disclosed equipment-linked chemistry agreement demonstrates why a bundled relationship needs a clear contractual perimeter.
[illegible]

Sources & Evidence

1. Terms and Conditions: Q020 - D1-4426 Approved Process Source
   · The clause flows applicable processing-source requirements into subcontracts; chemical availability alone does not establish access to covered work.
   ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   · The filing identifies linked equipment-chemistry commitments and raw-material, currency and tariff exposures; it does not establish account-specific adjustment or exit rights.
   ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
3. Authorisation
   · The authorization framework supports checking applicable entity, use and decision conditions before selecting a supply route.
   ([single-market-economy.ec.europa.eu](https://single-market-economy.ec.europa.eu/sectors/chemicals/reach/authorisation_en))
4. Química Sigma: Tratamiento de Superficies
   · Química Sigma advertises manufacture and commercialization of metal-treatment chemicals, providing a branded-supply alternative to an unconfirmed new licensing arrangement.
   ([quimicasigma.com](https://quimicasigma.com/index.php/tratamiento-de-superficies))
5. Fabricación de productos para tratamientos de superficies - CYV Industrias
   · C&V states that it manufactures named Química Sigma pretreatment products under license; its undated disclosure does not establish rights available to another entrant.
   ([cyvindustrias.com](https://cyvindustrias.com/fabricacion-de-productos-para-tratamientos-de-superficies/))
6. CHEMEON and SurTec Form Strategic Alliance in Global Surface Technology Market
   · SurTec contributes international infrastructure and local expertise; CHEMEON contributes U.S. access and its Nevada commercial hub.
   ([surtec.com](https://www.surtec.com/en/company/news/chemeon-and-surtec-form-strategic-alliance-in-global-surface-technology-market/))

5. Market Insights

5.1. Consumer Insights & End-User Perspective

Buyer choice is divided between the finishing operation's sourcing decision and the downstream customer's acceptance authority. Boeing's Q020 clause, effective October xx.xx 2024, requires approved processing sources for applicable work, extends that requirement into applicable subcontracts and preserves the seller's responsibility. ▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪ ▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪ ▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪

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Buyers should obtain account-specific delivery, conformity-documentation and complaint-escalation commitments; suppliers should distinguish initial acceptance from continuing performance recognition. The documented relationship does not establish identical preferences or approval conditions across other end-use industries.

Sources & Evidence

1. Terms and Conditions: Q020 - D1-4426 Approved Process Source
   · Boeing Q020, effective October xx.xx 2024, requires approved processing sources for applicable work, flows the requirement into applicable subcontracts, and preserves the seller's contractual responsibility. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
2. Chemetall receives the Airbus SQIP 2025 award for its 2024 performance
   · BASF's September xx.xx 2025 announcement identifies Ardrox cleaner, corrosion-protection and pretreatment supply to Airbus sites and subcontractors, and describes continuing reviews of supplier delivery and quality performance. ([basf.com](https://www.basf.com/global/en/media/news-releases/2025/xx.xx/p-xx.xx-xx.xx))

5.2. Consumer Experience Benchmarking

Public service offerings support comparison by buyer need, not a common customer-satisfaction score. ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ None alone establishes better delivery performance or equivalence between chemicals.

[redacted] In both cases, obtain written service-response and escalation commitments rather than substitute a network listing for an account obligation. Integrated support can simplify coordination, while separately contracted services can preserve flexibility if responsibility remains clear.

Sources & Evidence

1. General Metal Finishing
   · Atotech advertises general-metal-finishing TechCenters and an OEM-facing customer interface, establishing service attributes rather than comparative customer outcomes. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/))
2. XMAPP Approved Applicators Request
   · MacDermid Enthone offers application- and region-specific discovery of approved supply-chain applicators delivering treated parts to OEMs. ([industrial.macdermidenthone.cn](https://industrial.macdermidenthone.cn/quality-performance-systems/xmapp/xmapp-approved-applicators-request))
3. BONDERITE® Lineguard Process Control 200
   · Henkel advertises BONDERITE Lineguard Process Control xx.xx with remote monitoring, connectivity and data traceability; the advertised attributes do not establish customer-specific service outcomes. ([next.henkel-adhesives.com](https://next.henkel-adhesives.com/us/en/services/iot/bonderite-lineguardx.html))

5.3. Opportunity Mapping

[redacted] Where a downstream customer controls processing-source acceptance, the purchaser's interest must be accompanied by confirmation that the proposed route is usable. An accepted specialist can compete for a defined function without replacing the incumbent's complete portfolio; the incumbent can counter with continuity and a consolidated support commitment.

[redacted] This route is unsuitable where the required destination supply is unconfirmed, the advertised benefit does not address a material buyer cost, or transition obligations outweigh the supported benefit. A product-specific supply commitment and an internally accepted business case are stronger capture indicators than the environmental label alone.

[redacted]

[redacted] An incumbent already meeting those obligations remains a meaningful alternative. Borer's warning that legal and licensing requirements reduce its assortment in some countries demonstrates why neither a worldwide portfolio nor regional representation establishes complete local access.

[redacted] Suppliers should select the precise polishing or deposition requirement and release additional account resources against named-program acceptance and purchasing commitments. Buyers should compare functional alternatives and accountable supply routes, not presume that materials serving the same package are substitutes.

Thermal Management and Biological Interface Performance remain included objectives, but category membership is not an investment case. Entry under either objective requires a named treatment chemical, an identifiable purchasing counterparty and a documented acceptance relationship. [redacted]

Sources & Evidence

1. Fujifilm Launches Advanced Packaging CMP Slurry
   · The disclosure establishes supplier-reported adoption of a polishing material, not another buyer's acceptance or supply agreement. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))
2. Terms and Conditions: Q020 - D1-4426 Approved Process Source
   · The buyer's applicable contract determines recognized processing-source requirements, supporting identification of the acceptance authority before opportunity commitment. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
3. Less energy, more efficiency: Henkel optimizes aluminum anodizing with new additive Bonderite M-AD 2000A
   · The announcement identifies an aluminum-anodizing purchasing alternative but does not establish each facility's acceptance or realized benefits. ([henkel.com](https://www.henkel.com/press-and-media/press-releases-and-kits/2025-xx.xx-xx.xx-less-energy-more-efficiency-henkel-optimizes-aluminum-anodizing-with-new-additive-bonderite-m-ad-2000a-xx.xx))
4. Semiconductor Packaging Materials
   · Qnity advertises semiconductor-packaging deposition materials, including copper plating and under-bump metallization, establishing functions distinct from CMP polishing. ([qnityelectronics.com](https://www.qnityelectronics.com/semiconductor-packaging-materials.html))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   · Program acceptance and subsequent customer purchasing are separate commercial milestones, supporting selective electronics account commitments. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
6. Specialists in cleaning and disinfection
   · Borer's country-specific assortment warning counters an assumption that a worldwide portfolio establishes destination-level commercial availability. ([borer.swiss](https://www.borer.swiss/en/company))
7. CHEMEON and SurTec Form Strategic Alliance in Global Surface Technology Market
   · The documented partner contribution supports a conditional local-access route without proving offering-by-country fulfillment or binding account obligations. ([surtec.com](https://www.surtec.com/en/company/news/chemeon-and-surtec-form-strategic-alliance-in-global-surface-technology-market/))

5.4. Distribution Channel Analysis

[redacted] These establish channel-discovery and organizational footprints, not inventory, territorial exclusivity or delivery commitments for a named chemical. The local seller, importer where applicable, documentation provider and service escalation owner must be identified for each account.

A distributor route can address local ordering and fulfillment when the intermediary expressly accepts those obligations; direct selling retains the manufacturer interface but requires adequate supplier account coverage. Neither route automatically resolves customer acceptance. [redacted]

Sources & Evidence

1. General Metal Finishing
   · Atotech lists sales offices and general-metal-finishing support locations in Germany, India and Japan; these listings establish an organizational footprint, not account-specific fulfillment commitments. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/))
2. Find a distributor
   · Henkel's U.S. distributor-discovery page expressly includes Industrial Surface Treatments, without stating individual territory, inventory or service commitments. ([next.henkel-adhesives.com](https://next.henkel-adhesives.com/us/en/support/find-a-distributor.html))
3. XMAPP Approved Applicators Request
   · The XMAPP listing concerns applicators supplying parts, which is commercially distinct from a distributor selling treatment chemicals. ([industrial.macdermidenthone.cn](https://industrial.macdermidenthone.cn/quality-performance-systems/xmapp/xmapp-approved-applicators-request))

5.5. Pricing Trend Analysis

[redacted] The company also protects products through patents, trade secrets and contracts, while many proprietary products are unpatented. Patent status alone therefore does not settle sourcing freedom.

[redacted] For covered merchandise, procurement should establish the responsible importer and allocation of customs-related costs before accepting a sourcing proposal. A different origin may change trade exposure without establishing customer acceptance of the replacement supply route.

Sources & Evidence

1. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   · Element Solutions discloses raw-material, currency and tariff exposures; an Industrial Solutions equipment sale associated with a multi-year chemistry agreement; and protection through patents, trade secrets and contracts, with many proprietary products unpatented. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
2. Chromium Trioxide From India: Final Affirmative Determination of Sales at Less Than Fair Value
   · Commerce's final affirmative chromium-trioxide determination for India applies October xx.xx 2026, includes import-deposit instructions, and makes an antidumping duty order dependent on a separate affirmative injury determination. ([govinfo.gov](https://www.govinfo.gov/content/pkg/FR-2026-xx.xx-xx.xx/pdf/2026-xx.xx.pdf))
3. Chromium Trioxide From the Republic of Türkiye: Final Affirmative Determination of Sales at Less Than Fair Value
   · Commerce's final affirmative chromium-trioxide determination for Türkiye applies October xx.xx 2026, continues import-related instructions, and distinguishes that determination from a subsequent duty order dependent on injury findings. ([govinfo.gov](https://www.govinfo.gov/content/pkg/FR-2026-xx.xx-xx.xx/pdf/2026-xx.xx.pdf))

5.6. Regulatory Compliance & Standards Framework

European chemical access is use-specific rather than determined by a broad chromium label. REACH Annex XIV authorization concerns defined uses, and EASA identifies chromium-trioxide corrosion-prevention surface treatment as an aviation authorization example. [redacted]

Great Britain requires a separate jurisdictional assessment. HSE states that UK REACH and EU REACH operate independently, with EU REACH continuing in Northern Ireland. ■■■ ■■■ ■■■■■■■■■ ■■■■■ ■■■■■■■ ■■■■■ ■■■■■■■ ■■ ■■■■■■■■■■■ ■■ ■■■■■■■■■■■■ ■■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■ ■■■■■■■■ ■■ ■■■■■■■■■■ ■■■■■ ■■■■■■■ ■■■■■■ ■■■■■ ■■ ■■■ ■■■■■■■ ■■■ ■■ ■■■■■■■■■■■■■ ■■■■■ ■■■■■■■ ■■ ■■ ■■■■■■■■ ■■ ■■■■■■■■■■■■■ ■■■■ ■■■■ ■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■ ■■■■■ ■■■■■■■ ■■ ■■■■■■■ ■■■■■ ■■■■■■■■■■■ ■■ ■■■ ■■■■■■■■■ ■■■■■■■ ■■■ ■■■■ ■■■■■■■■ ■■■■■■■■ ■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■■■■ ■■■■■■■■ ■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■ ■■■■■ ■■■■■■■■■

U.S. facility and employer obligations remain distinct from chemical sourcing. EPA incorporates applicable metal-finishing discharge requirements into permits or other control mechanisms and distinguishes related facility categories; its chrome-finishing PFAS initiative is described as rulemaking for a subset of facilities. ■■■■ ■■■■■■■■■■ ■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■■■■■■■■■■■■ ■■■■■■ ■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■ ■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■■ ■■■ ■■■■■■ ■■■■■■■■ ■■■■ ■■■ ■■■■■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■ ■ ■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■ ■■■■■ ■■■■ ■■■ ■■■■■■■■■■■■■ ■■■■■■ ■■■■■■■■ ■■■■■■■■■■ ■■ ■■■■■■■■■■■■■■■■■■■ ■■■■■■■■■■■■■■■■

Sources & Evidence

1. Metal Finishing Effluent Guidelines
   · EPA incorporates applicable metal-finishing discharge requirements into direct-discharge permits or indirect-discharge control mechanisms, distinguishes related facility categories, and describes PFAS rulemaking for a subset of chrome-finishing facilities. ([epa.gov](https://www.epa.gov/eg/metal-finishing-effluent-guidelines))
2. 1910.1026 - Chromium (VI)
   · OSHA's chromium(VI) standard assigns hazard-communication responsibilities to relevant manufacturers, importers, distributors and employers, including employee access to labels, safety data sheets and training. ([osha.gov](https://www.osha.gov/laws-regs/regulations/standardnumber/1910/xx.xx))
3. Authorisation
   · The European Commission explains that REACH Annex XIV authorization concerns specific uses and that authorization decisions determine permission after the applicable sunset date. ([single-market-economy.ec.europa.eu](https://single-market-economy.ec.europa.eu/sectors/chemicals/reach/authorisation_en))
4. REACH and Aviation
   · EASA identifies chromium-trioxide corrosion-prevention surface treatment as an aviation authorization example and distinguishes existing chromium authorization requirements from the launched restriction process. ([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
5. The Commission advances work on restrictions of hazardous chemical substances
   · The Commission's July xx.xx 2026 announcement describes continuing work on PFAS and hexavalent-chromium restriction initiatives; that announcement does not establish an operative blanket prohibition. ([single-market-economy.ec.europa.eu](https://single-market-economy.ec.europa.eu/news/commission-advances-work-restrictions-hazardous-chemical-substances-2026-xx-xx-02_en?prefLang=cs))
6. UK REACH explained
   · HSE states that UK REACH and EU REACH operate independently, UK REACH governs Great Britain, and EU REACH continues to apply in Northern Ireland. ([hse.gov.uk](https://www.hse.gov.uk/reach/about.htm))

7. Downstream user obligations

   · HSE requires covered Great Britain downstream users to maintain UK authorization coverage. For the specified transitional users changing suppliers, the route must be authorized in Great Britain or the user must obtain its own authorization. Notification relying on upstream authorization is required within three months of receipt after publication of the decision.
   ([hse.gov.uk](https://www.hse.gov.uk/REACH/authorisation-downstream.htm))

5.7. ESG & Sustainability Analysis

Buyer-led decarbonization can change sourcing even when the chemical's commercial function remains unchanged. TSMC reports adopting aqueous ammonia derived from blue ammonia at Fab 14A in the fourth quarter of 2025, alongside carbon-footprint verification and procurement standardization. ■■■ ■■■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■ ■■■■■■■■■■■■ ■ ■■■■■■■■■■ ■■■■■■■■■ ■■■■■ ■■ ■■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■ ■■■■■ ■ ■■■■■■■ ■■■■■■■■■■■■■ ■■■■■■■ ■■■■■■■■■ ■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■■ ■■■■■ ■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■■■■ ■■■ ■ ■■■■■■■■■■ ■■■■■■■■■■■ ■■■■■■■ ■■■■■■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■ ■■■ ■■■■■■■■■ ■ ■■■■■■■■■ ■■■■■■■■■■■ ■■■■■■■■■■■■

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Resource-efficiency offerings require a separate, facility-specific assessment. Henkel's August 2025 BONDERITE M-AD 2000A announcement reports European availability, Qualanod approval and a gradual wider rollout, with supplier-claimed energy and material benefits. ■■■■ ■■■■■■■ ■■ ■■■■■■■■■ ■■■■■■■■■■■ ■■■ ■■■■■■■■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■ ■■ ■■■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■ ■■ ■■■■■ ■■■■■■■■■ ■■■■■■■ ■■■■■■■ ■■■■■■■■■ ■■■■■■■■ ■■■■ ■■■■■ ■■■■■■■ ■■■ ■■■■■■■■■■■ ■■■■■■■ ■■■■■■■ ■■■■■■■■■■■ ■■■■■■■■■ ■■ ■■■■■■■■ ■■■■■■■■■ ■■■■■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■ ■■■ ■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■ ■■■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■ ■■■

Sources & Evidence

1. Less energy, more efficiency: Henkel optimizes aluminum anodizing with new additive Bonderite M-AD 2000A

   · Henkel's August xx.xx 2025 launch describes resource-efficiency benefits for BONDERITE M-AD 2000A, reports European availability and Qualanod approval, and announces gradual introduction elsewhere. These remain supplier-reported benefits and status statements.
   ([henkel.com](https://www.henkel.com/press-and-media/press-releases-and-kits/2025-xx.xx-xx.xx-less-energy-more-efficiency-henkel-optimizes-aluminum-anodizing-with-new-additive-bonderite-m-ad-2000a-xx.xx))

2. TSMC Introduces Blue Ammonia, a First for Taiwan's Semiconductor Industry
   · TSMC reports adoption of aqueous ammonia derived from blue ammonia at Fab 14A in the fourth quarter of 2025, with carbon-footprint verification and procurement standardization among its purchasing measures. The identified chemical serves wafer cleanliness. ([esg.tsmc.com](https://esg.tsmc.com/en-US/articles/xx.xx))
3. Supplier Code of Conduct
   · BMW makes relevant human-rights requirements binding through purchasing terms; direct suppliers confirm required human-rights and environmental standards and must make their sub-suppliers aware of the requirements.
   ([bmwgroup.com](https://www.bmwgroup.com/en/sustainability/supply-chain/popup/supplier-code-of-conduct.html))

5.8. Disruption & Risk Scenarios

[illegible]
Monitor operative decisions, applicable expiry conditions and written customer acceptance. Retain an existing route only while its permission remains valid; avoid commitments that depend on uncovered use.

Trade-related disruption is narrower than the entire chemical market. Commerce's chromium-trioxide determinations for India and Turkey, applicable October xx.xx 2026, distinguish import instructions from subsequent injury and duty-order decisions. [illegible]

A change in contractual responsibility could weaken continuity even when the product remains unchanged. Surventis announced product and team continuity, which counters an assumption of automatic disruption. [illegible]

A planned local facility could fail to become a usable supply route on the buyer's required timetable. [illegible]

[illegible] Suppliers and channel partners should avoid irreversible local account commitments supported only by a facility announcement.

Sources & Evidence

1. Surventis launches as an independent global leader in automotive coatings and surface treatment
   · Announced product and team continuity counters an automatic-disruption assumption but does not determine individual seller or agreement obligations. ([chemetall.com](https://www.chemetall.com/global/en/about-us/press-releases/2026/Surventis-launches-as-an-independent-global-leader))
2. Chromium Trioxide From India: Final Affirmative Determination of Sales at Less Than Fair Value
   · Commerce's India chromium-trioxide determination applies October xx.xx 2026 and distinguishes import instructions from a duty order dependent on an injury determination. ([govinfo.gov](https://www.govinfo.gov/content/pkg/FR-2026-xx.xx-xx.xx/pdf/2026-xx.xx.pdf))
3. Chromium Trioxide From the Republic of Türkiye: Final Affirmative Determination of Sales at Less Than Fair Value
   · Commerce's Turkey chromium-trioxide determination applies October xx.xx 2026; written merchandise scope and subsequent procedural decisions govern the bounded exposure. ([govinfo.gov](https://www.govinfo.gov/content/pkg/FR-2026-xx.xx-xx.xx/pdf/2026-xx.xx.pdf))
4. Authorisation
   · Authorization decisions govern specific uses separately from restriction initiatives, grounding the legal-timing risk scenario. ([single-market-economy.ec.europa.eu](https://single-market-economy.ec.europa.eu/sectors/chemicals/reach/authorisation_en))
5. The Commission advances work on restrictions of hazardous chemical substances
   · The roadmap announcement distinguishes ongoing policy work from adopted restrictions, supporting monitoring of operative instruments rather than announcement-driven switching. ([single-market-economy.ec.europa.eu](https://single-market-economy.ec.europa.eu/news/commission-advances-work-restrictions-hazardous-chemical-substances-2026-xx-xx-02_en?prefLang=cs))
6. Downstream user obligations
   · For specified Great Britain transitional downstream users, changing suppliers requires authorized Great Britain coverage or the user's own authorization. ([hse.gov.uk](https://www.hse.gov.uk/REACH/authorisation-downstream.htm))
7. Fabricación de productos para tratamientos de superficies - CYV Industrias
   · The stated licensed relationship separates producer and technology-principal roles without establishing current duration, territorial scope or continuity terms. ([cyvindustrias.com](https://cyvindustrias.com/fabricacion-de-productos-para-tratamientos-de-superficies/))
8. Fujifilm to Expand CMP Slurry Production Capacity in the United States | Fujifilm [Switzerland]
   · The announced addition is prospective and does not constitute a product-specific delivery obligation from the additional facilities. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

5.9. Return on Investment & Cost-Benefit Analysis

[illegible]

[redacted] Applicable EPA permit or control obligations remain part of the covered operator's position; a replacement should not be credited with removing obligations that still apply. Retaining an accepted incumbent is preferable when the proposed benefits do not outweigh these continuing and transitional burdens.

For a chemical supplier, direct coverage and intermediary access have different economic conditions. [redacted] In either case, incremental commitment should follow an identifiable acceptance route and an enforceable customer relationship, rather than an announcement-led sales assumption.

[redacted] Keeping treatment captive preserves the direct chemical-supplier interface and scheduling control but retains the corresponding ownership and facility responsibilities. Neither route has an established cost advantage without the buyer's actual commitments.

Sources & Evidence

1. Metal Finishing Effluent Guidelines
   · EPA incorporates applicable metal-finishing requirements into facility permits or control mechanisms and distinguishes related facility categories.
   ([epa.gov](https://www.epa.gov/eg/metal-finishing-effluent-guidelines))
2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   · Element Solutions sells directly and through intermediaries and describes local commercial presence, grounding the conditional comparison of coverage costs and channel control.
   ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
3. Less energy, more efficiency: Henkel optimizes aluminum anodizing with new additive Bonderite M-AD 2000A
   · Supplier-reported energy and material benefits provide a purchasing proposition, not an account-specific cost-benefit conclusion.
   ([henkel.com](https://www.henkel.com/press-and-media/press-releases-and-kits/2025-xx.xx-xx.xx-less-energy-more-efficiency-henkel-optimizes-aluminum-anodizing-with-new-additive-bonderite-m-ad-2000a-xx.xx))
4. Commercial Salt Bath Processing in Detroit | Kolene
   · Kolene advertises processing at its Detroit plant for selected removal and cleaning applications, establishing a service alternative distinct from chemical purchasing.
   ([kolene.com](https://www.kolene.com/service/commercial-processing/))

6. Cumulative Impact of Artificial Intelligence 2026

[redacted] Its potential influence on chemical-supplier selection depends on compatible infrastructure, usable records and a support agreement. Buyers should establish data access, service continuity and chemical-switching rights before accepting an integrated relationship.

Reported adoption remains narrower than a claim of market-wide transformation. [redacted] Procurement, quality and information-security functions should govern business-information uses together; automated outputs should not be treated as supplier commitments or customer acceptance.

Sources & Evidence

1. MKS Inc. Annual Report 2025
   · MKS reports early-stage integration of AI into its business and identifies erroneous outputs, confidential-information exposure, third-party risks and inadequate human oversight as potential problems. This is corporate disclosure, not proof of deployment at a particular finishing customer. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
2. Industrial digital solutions
   · Atotech advertises its PCB-focused Digital Factory Suite with AI and machine learning, maintenance planning, traceability, cloud-agnostic and on-premises options, and compatibility requirements. This establishes an advertised adjacent offering, not buyer-specific adoption. ([atotech.com](https://www.atotech.com/products/electronics/industrial-digital-solutions/))
3. AI talent, skills and literacy
   · The European Commission explains that Article xx.xx retains an AI-literacy obligation for providers and deployers following the July 2026 amendment, without requiring a specified individual proficiency level. ([digital-strategy.ec.europa.eu](https://digital-strategy.ec.europa.eu/en/policies/ai-talent-skills-and-literacy))

7. Chemical Surface Treatment Market, by Product Function

Product Function changes the appropriate purchasing comparison: an individual chemical, a multifunctional product, and a supported chemical package are not equivalent commercial propositions. Henkel advertises BONDERITE M-FE xx.xx as combining cleaning and conversion coating. ■■■■■■ ■■■■■■■■■ ■■■■ ■■ ■■■■■■■■ ■■■■ ■■■■■■■■■■ ■■■■■■■ ■■■■■■■■ ■■■■■■ ■■■■■■ ■ ■■■■■ ■■■■■■■■■■ ■■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■■■■■ ■■■ ■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■ ■■■■■■■ ■■■■■ ■■ ■■■■■■■■■■ ■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■■■■■■ ■■■■■■■ ■■■■■■■■ ■■ ■■■■■■■■■■ ■■■■■■■ ■■■■■■■■■■■■■ ■■■■ ■■■ ■■■■■■■■ ■■■■■■■■ ■■■■■■■

Cleaners and Degreasers, Pickling and Descaling Agents, Etchants, and Strippers address different purchased purposes despite overlapping supplier terminology. ■■■■■■■ ■■■■■ ■■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■ ■■■■■■■■■■ ■■■ ■■■■■ ■■■ ■■■■■■■■■■■■■■ ■■■■■■■■ ■ ■■■■■■■■■■■■■ ■■■■■■■■ ■■ ■■■■■■■■■ ■■■ ■■■■■■■■■■■■■■ ■■ ■■■■■■■■■■■ ■■ ■ ■■■■■■■■■■■■■■■ ■■■■■■■■ Procurement should establish the material-removal purpose and article requirement before inviting competing offers, rather than create a common shortlist from product names alone.

■■■■■■■■■■■■ ■■■ ■■■■■■■■■■■ ■■■■■■■■■■■■■■■■■■ ■■■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■■■■ ■■■■■■■■■■ ■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■■ ■■■■■■■■■■■ ■■■■■■■ ■■■■■■■ ■■■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■■ ■■■■■■■■■■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■■■■ ■■■■■■■■■■■■■ A shared supplier can coordinate several functions, but brand-family membership does not establish that one product replaces another. The commercial boundary should follow the named offering and purchased purpose, especially where a package combines preparatory and protective functions.

Galvanizing Fluxes and Metal-Deposition Chemicals also require different supplier capabilities. ■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■ ■■■■ ■■■■■■■■■ ■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■■■■■ ■■■ ■■■■■■■■■■■■■■■ ■■■■■■ ■■ ■■■■■■■■■■ ■ ■■■■■■■■■■ ■■■■■■ ■■■■■■■■ Buyers should seek an explicit offering for the required function rather than infer coverage from a supplier's general involvement in metal finishing.

Polishing and Brightening Agents, Anodizing Chemicals, Colorants and Coloring Additives, and Sealing Chemicals remain distinct purchasing categories within broader finishing portfolios. SurTec separately advertises brightening products, its SurTec xx.xx anodizing additive, coloring products, and sealing families. ■■■■■■■■■■ ■■■■■■■■■■ ■■■■ ■■■■■■■■■■■■■■■■■■ ■■■ ■■■■■■■ ■■■■■■ ■■■■■■■■■■■■ ■ ■■■■■■■■■■ ■■■■■■■■■■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■ ■■■ ■■■■■■■ ■■■■■■■■■■■ ■■■■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■ ■■■■■■■■■■ ■■■ ■■■■■ ■■■■■■■ ■■■■■■■■■■■■ ■■

Figure 8. Global Chemical Surface Treatment Market Size, by Product Function, 2025 (%)

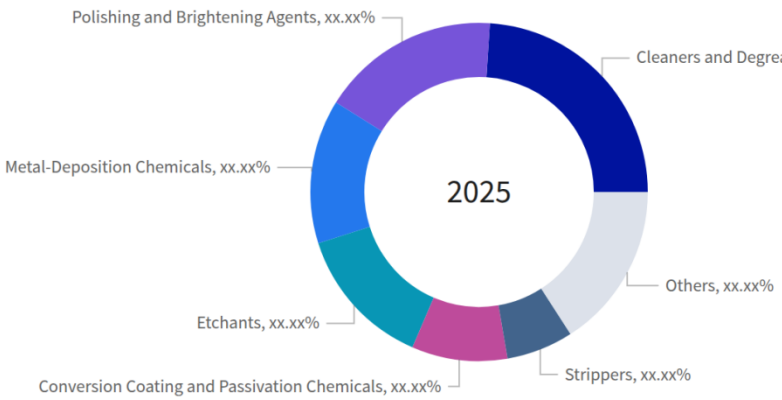

Figure 9. Global Chemical Surface Treatment Market, by Product Function, 2032 (USD Million)

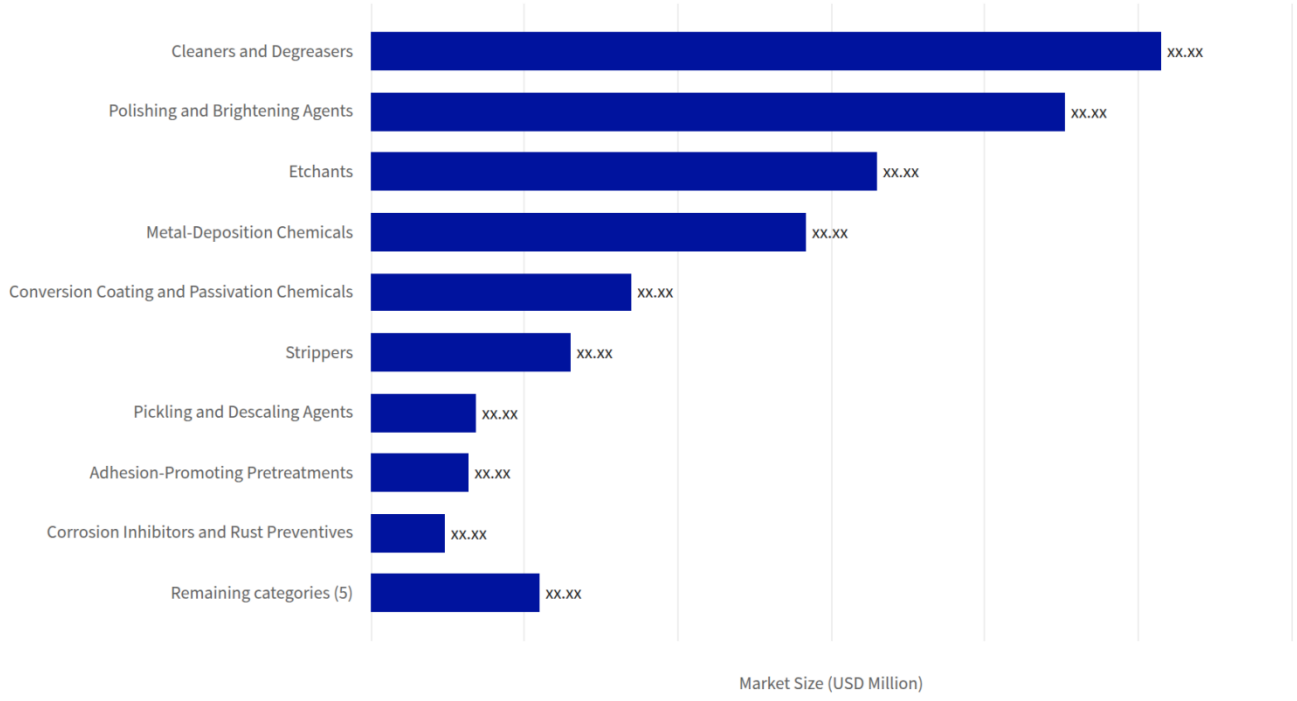

Table 4. Global Chemical Surface Treatment Market, by Product Function growth contribution, 2025-2032

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Scope total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 5. Global Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Industry

- Chemetall advertises Gardostrip paint strippers, Gardolene activating and passivating agents, Gardobond conversion coatings, Oxsilan multi-metal pretreatment, and corrosion-protection products. These establish differentiated portfolio roles rather than product interchangeability. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

2. Fujifilm Launches Advanced Packaging CMP Slurry

- Fujifilm announced an advanced-packaging CMP slurry on September xx.xx 2025, establishing an application-specific polishing offering rather than equivalence with industrial brightening products. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

3. Pretreatment solutions

- Atotech separately advertises UniClean cleaning and pickling products, Alumetch etchants, and UniStrip metal strippers, supporting comparison by the purchased function. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/pretreatment/))

4. BONDERITE M-FE 1070

   · Henkel describes BONDERITE M-FE xx.xx as providing simultaneous cleaning and conversion coating. This supports the observation that one purchased offering can cover multiple functions. ([next.henkel-adhesives.com](https://next.henkel-adhesives.com/us/en/products/surface-treatments/central-pdp.html/bonderite-m-fe-xx.xx/BP000000154103.html))

5. Zinc Ammonium Chloride Fluxes

   · Zaclon advertises named galvanizing fluxes, establishing a chemical offering family distinct from metal-deposition chemicals. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))

6. Value-added Anodizing Portfolio

   · SurTec separately catalogs brightening, anodizing, coloring, and sealing products, including the SurTec xx.xx anodizing additive. Portfolio inclusion establishes advertised roles, not acceptance at every buyer. ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share. ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share. ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases. ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases. ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions. ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions. ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting. ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting. ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

7. Desmear and metallization

   · Atotech's Printoganth portfolio contains electroless-copper offerings, supporting an evidenced metal-deposition chemical role. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

8. Cooperative Patent Classification - C23G Definitions

· Taxonomy evidence: C23G explicitly excludes nonmetallic-material treatment and records overlapping cleaning, pickling, stripping, and etching terminology. It cannot independently establish the full Global nonmetal boundary or a mutually exclusive commercial product partition. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC23G.html))

9. North American Product Classification System Canada 2022 Version 1.0

· Taxonomy evidence: NAPCS Canada 2022 code xx.xx identifies metal-treating and plating compounds as chemical goods. The same classification separately identifies fee-based metal-finishing services, supporting a chemical-product rather than service-revenue boundary. Its coverage is North American classification evidence, not a complete global partition. ([www150.statcan.gc.ca](https://www150.statcan.gc.ca/n1/pub/xx.xx-xx.xx-x/xx.xx-xx.xx-x2022001-eng.pdf))

10. Metal Finishing Effluent Guidelines - U.S. EPA

· Taxonomy evidence: EPA identifies electroplating, electroless plating, anodizing, conversion-related coating, chemical etching, and printed-circuit-board manufacture as distinct core operation groups. These support functional distinctions but do not measure chemical-product sales or establish global market coverage. ([epa.gov](https://www.epa.gov/eg/metal-finishing-effluent-guidelines))

11. MKS Inc. Annual Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

12. Element Solutions Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

13. Henkel Annual Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

14. BASF Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

15. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

· Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

16. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

17. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

18. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

19. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

20. Freudenberg Chemical Specialities - Business Portfolio and Numbers

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

21. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

22. Internal Revenue Service - Yearly Average Currency Exchange Rates

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

23. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

24. SEMI Materials Market Data Subscription - Coverage and Methodology
· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))
25. Entegris, Inc. Form 10-K for the year ended December 31, 2025
· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))
26. BASF Completes Acquisition of Chemetall - December 15, 2016
· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))
27. MKS Inc. Annual Report 2025
· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
28. Sika Aktivator-205 - Product Data Sheet
· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

7.1. Cleaners and Degreasers

Table 6. Global Chemical Surface Treatment Market Size, by Cleaners and Degreasers, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 7. Global Chemical Surface Treatment Market Size, by Cleaners and Degreasers, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 8. Global Chemical Surface Treatment Market Size, by Cleaners and Degreasers, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. European Commission Decision M.7498 - Compagnie de Saint-Gobain/Sika, July 22, 2015
   · Taxonomy evidence: The decision independently recognizes glass cleaners as a commercial surface-treatment product group, supporting analogous dedicated nonmetal cleaners within the provisional boundary.
   ([ec.europa.eu](https://ec.europa.eu/competition/mergers/cases/decisions/m7498_20150722_20310_4457021_EN.pdf))
2. Cooperative Patent Classification - C23G Definitions
   · Taxonomy evidence: C23G distinguishes degreasing through removal of organic surface contamination from pickling directed at inorganic surface deposits. This supports separate purchased functions rather than a single undifferentiated cleaning category.
   ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC23G.html))
3. North American Product Classification System Canada 2022 Version 1.0
   · Taxonomy evidence: Illustrative products under code xx.xx include industrial metal-cleaning degreasers.
   ([www150.statcan.gc.ca](https://www150.statcan.gc.ca/n1/pub/xx.xx-xx.xx-x/xx.xx-xx.xx-x2022001-eng.pdf))
4. Cooperative Patent Classification - C25F Definitions
   · Taxonomy evidence: Electrolytic cleaning and degreasing are explicitly recognized functions.
   ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC25F.html))
5. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion.
   ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
6. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total.
   ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   · Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge.
   ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   · Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue.
   ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.

7. Henkel Annual Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

8. BASF Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

9. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

· Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

10. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

11. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

12. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

13. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

14. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

15. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

16. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

17. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

18. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

19. Entegris, Inc. Form 10-K for the year ended December 31, 2025
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))
20. BASF Completes Acquisition of Chemetall - December 15, 2016
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))
21. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.

22. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
23. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.

24. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
25. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
26. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
27. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
28. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.

29. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
30. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
31. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

7.2. Polishing and Brightening Agents

Table 9. Global Chemical Surface Treatment Market Size, by Polishing and Brightening Agents, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 10. Global Chemical Surface Treatment Market Size, by Polishing and Brightening Agents, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 11. Global Chemical Surface Treatment Market Size, by Polishing and Brightening Agents, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Cooperative Patent Classification - C23F Definitions
   - Taxonomy evidence: C23F recognizes chemical polishing or brightening separately from etching and refers electrolytic polishing to C25F. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC23F.html))
2. Cooperative Patent Classification - C25F Definitions
   - Taxonomy evidence: C25F separately identifies electrolytic polishing. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC25F.html))
3. MKS Inc. Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

4. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
5. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
6. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
7. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

8. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

9. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

10. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

11. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

12. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

13. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

14. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

15. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

16. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

17. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

18. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

19. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
20. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

21. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
22. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
23. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

24. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
25. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
26. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
27. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
28. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
29. SurTec - Value-added Anodizing Portfolio
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
      ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
      ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

30. Fujifilm Launches Advanced Packaging CMP Slurry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

7.3. Metal-Deposition Chemicals

Table 12. Global Chemical Surface Treatment Market Size, by Metal-Deposition Chemicals, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 13. Global Chemical Surface Treatment Market Size, by Metal-Deposition Chemicals, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 14. Global Chemical Surface Treatment Market Size, by Metal-Deposition Chemicals, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. North American Product Classification System Canada 2022 Version 1.0
   · Taxonomy evidence: Code xx.xx explicitly includes electroplating solutions and additives. ([www150.statcan.gc.ca](https://www150.statcan.gc.ca/n1/pub/xx.xx-xx.xx-x/xx.xx-xx.xx-x2022001-eng.pdf))
2. Metal Finishing Effluent Guidelines - U.S. EPA
   · Taxonomy evidence: Electroplating and electroless plating are separately recognized operations, supporting one deposition function that can cross platform classes. ([epa.gov](https://www.epa.gov/eg/metal-finishing-effluent-guidelines))
3. Cooperative Patent Classification - C23C Definitions
   · Taxonomy evidence: C23C recognizes electroless coating compositions and contact plating; its terminology associates contact plating with immersion or displacement plating. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC23C.html))
4. Cooperative Patent Classification - C25D Scheme
   · Taxonomy evidence: C25D xx.xx/xx.xx identifies electroplating solutions as a recognized classification group. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/cpc-C25D.html))
5. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

6. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
7. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
8. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

9. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products.
([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

· Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption.
([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

10. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction.
([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

11. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion.
([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

12. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation.
([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight.
([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight.
([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

13. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments.
([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

14. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue.
([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

15. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))
16. Internal Revenue Service - Yearly Average Currency Exchange Rates
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))
17. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25
    - Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
18. SEMI Materials Market Data Subscription - Coverage and Methodology
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))
19. Entegris, Inc. Form 10-K for the year ended December 31, 2025
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))
20. BASF Completes Acquisition of Chemetall - December 15, 2016
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

21. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
22. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

23. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
24. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
25. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

26. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
27. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
28. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
29. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
30. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
31. MKS Inc. Annual Report 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

7.4. Etchants

Table 15. Global Chemical Surface Treatment Market Size, by Etchants, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 16. Global Chemical Surface Treatment Market Size, by Etchants, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 17. Global Chemical Surface Treatment Market Size, by Etchants, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Electrical and Electronic Components Effluent Guidelines - U.S. EPA
   · Taxonomy evidence: EPA's electrical-and-electronic industry description includes etching but also adjacent mechanical and manufacturing activities. Recognition of etching in that setting does not establish inclusion of every wafer-processing chemical in the retained product-function category. ([epa.gov](https://www.epa.gov/eg/electrical-and-electronic-components-effluent-guidelines))
2. Metal Finishing Effluent Guidelines - U.S. EPA
   · Taxonomy evidence: The EPA operation list separately recognizes chemical etching and milling. ([epa.gov](https://www.epa.gov/eg/metal-finishing-effluent-guidelines))
3. Cooperative Patent Classification - C23F Definitions
   · Taxonomy evidence: C23F separately classifies chemical etching and identifies circuit-board microetching through related classification references. It distinguishes substrate-material removal from cleaning classifications. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC23F.html))
4. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

5. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
6. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
7. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
8. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

9. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

10. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

11. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

12. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

13. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

14. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

15. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

16. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25
    - Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
17. SEMI Materials Market Data Subscription - Coverage and Methodology
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))
18. Entegris, Inc. Form 10-K for the year ended December 31, 2025
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))
19. BASF Completes Acquisition of Chemetall - December 15, 2016
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

20. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
21. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

22. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
23. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
24. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

25. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
26. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
27. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
28. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
29. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.

7.5. Conversion Coating and Passivation Chemicals

Table 18. Global Chemical Surface Treatment Market Size, by Conversion Coating and Passivation Chemicals, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 19. Global Chemical Surface Treatment Market Size, by Conversion Coating and Passivation Chemicals, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 20. Global Chemical Surface Treatment Market Size, by Conversion Coating and Passivation Chemicals, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys, May 2, 2006
   · Taxonomy evidence: The specification covers chemical conversion materials, separately classified by composition, performance class, supplied form, and application method. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))
2. Metal Finishing Effluent Guidelines - U.S. EPA
   · Taxonomy evidence: The EPA list identifies phosphating and chromating within its coating group. ([epa.gov](https://www.epa.gov/eg/metal-finishing-effluent-guidelines))
3. Cooperative Patent Classification - C23C Definitions
   · Taxonomy evidence: C23C xx.xx/xx.xx groups conversion coatings and metal passivation, while distinguishing chemical coating and contact plating elsewhere. This supports combining conversion and passivation without equating them with deposited metal layers. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC23C.html))
4. ASTM A967/A967M-25 - Chemical Passivation of Stainless Steel Parts
   · Taxonomy evidence: ASTM A967/A967M-xx.xx recognizes passivation treatments for stainless steel and distinguishes cleaning, descaling, and passivation within its scope. Its abstract recognizes both immersion-based chemical and electrochemical passivation. No treatment instructions are used here. ([store.astm.org](https://store.astm.org/a0967_a0967m-xx.xx.html))

5. MKS Inc. Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
6. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
7. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
8. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

9. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

· Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

10. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

11. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

12. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

13. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

14. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

15. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

16. Internal Revenue Service - Yearly Average Currency Exchange Rates

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

17. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

    · Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

    · Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

    · Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

    · Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

18. SEMI Materials Market Data Subscription - Coverage and Methodology

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

19. Entegris, Inc. Form 10-K for the year ended December 31, 2025

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

20. BASF Completes Acquisition of Chemetall - December 15, 2016

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

21. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
22. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

23. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
24. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
25. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

26. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
27. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
28. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
29. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
30. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
31. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

7.6. Strippers

Table 21. Global Chemical Surface Treatment Market Size, by Strippers, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 22. Global Chemical Surface Treatment Market Size, by Strippers, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 23. Global Chemical Surface Treatment Market Size, by Strippers, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Cooperative Patent Classification - C23G Definitions
   · Taxonomy evidence: The glossary includes removal of nonmetallic inorganic coatings within pickling. Assigning applied-film removal to Strippers is therefore an explicit commercial-purpose allocation convention, not a claim that CPC terminology supplies exclusive peers. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC23G.html))
2. Cooperative Patent Classification - C25F Definitions
   · Taxonomy evidence: C25F includes electrolytic removal of metallic coatings, supporting stripping chemistry beyond paint removal. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC25F.html))
3. Cooperative Patent Classification - C09D Scheme
   · Taxonomy evidence: C09D xx.xx/xx.xx explicitly identifies chemical paint and ink removers. This supports a stripping-product function distinct from subsequently purchased coating materials; only industrial workpiece uses inside the captured boundary are retained. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/cpc-C09D.html))
4. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

5. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
6. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
7. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
8. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

9. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

10. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

11. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

12. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

13. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

14. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

15. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

16. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25
    - Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
17. SEMI Materials Market Data Subscription - Coverage and Methodology
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))
18. Entegris, Inc. Form 10-K for the year ended December 31, 2025
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))
19. BASF Completes Acquisition of Chemetall - December 15, 2016
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

20. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
21. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

22. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
23. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
24. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

25. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
26. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
27. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
28. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
29. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.

7.7. Pickling and Descaling Agents

Table 24. Global Chemical Surface Treatment Market Size, by Pickling and Descaling Agents, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 25. Global Chemical Surface Treatment Market Size, by Pickling and Descaling Agents, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 26. Global Chemical Surface Treatment Market Size, by Pickling and Descaling Agents, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Cooperative Patent Classification - C23G Definitions
   - Taxonomy evidence: C23G lists etching and several cleaning or stripping expressions among overlapping patent usages. Documented purchased purpose, rather than a product name alone, is required to distinguish retained pickling preparations from etchants and applied-coating strippers. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC23G.html))
   - Taxonomy evidence: The C23G glossary associates pickling with removal of rust, scale, and corrosion deposits. It also records overlapping terminology, so product labels alone cannot establish allocation. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC23G.html))
2. Cooperative Patent Classification - C25F Definitions
   - Taxonomy evidence: Electrolytic pickling and descaling are explicitly recognized functions. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC25F.html))
3. MKS Inc. Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

4. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
5. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
6. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
7. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

8. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

9. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

10. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

11. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

12. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

13. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

14. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

15. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

16. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

17. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

18. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

19. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
20. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

21. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
22. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
23. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

24. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
25. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
26. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
27. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
28. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
29. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

7.8. Adhesion-Promoting Pretreatments

Table 27. Global Chemical Surface Treatment Market Size, by Adhesion-Promoting Pretreatments, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 28. Global Chemical Surface Treatment Market Size, by Adhesion-Promoting Pretreatments, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 29. Global Chemical Surface Treatment Market Size, by Adhesion-Promoting Pretreatments, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. European Commission Decision M.7498 - Compagnie de Saint-Gobain/Sika, July 22, 2015
   · Taxonomy evidence: In its 2015 automotive-glass assessment, the Commission separately considered glass cleaners, surface activators, and primers alongside adhesives. This establishes independently recognized surface-preparation purchases in that EEA application, not universal inclusion of every primer or adhesive. ([ec.europa.eu](https://ec.europa.eu/competition/mergers/cases/decisions/m7498_20150722_20310_4457021_EN.pdf))
2. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
4. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
5. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
6. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

7. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

8. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

9. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

10. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

11. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

12. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

13. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

14. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

15. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

16. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

17. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

18. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
19. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

20. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
21. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
22. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

23. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
24. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
25. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
26. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
27. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
28. Sika Aktivator-205 - Product Data Sheet
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

7.9. Corrosion Inhibitors and Rust Preventives

Table 30. Global Chemical Surface Treatment Market Size, by Corrosion Inhibitors and Rust Preventives, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 31. Global Chemical Surface Treatment Market Size, by Corrosion Inhibitors and Rust Preventives, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 32. Global Chemical Surface Treatment Market Size, by Corrosion Inhibitors and Rust Preventives, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. North American Product Classification System Canada 2022 Version 1.0
   · Taxonomy evidence: The code includes corrosion inhibitors and rust-inhibitor and rust-preventive preparations. Inclusion here remains restricted to the captured surface-treatment boundary. ([www150.statcan.gc.ca](https://www150.statcan.gc.ca/n1/pub/xx.xx-xx.xx-x/xx.xx-xx.xx-x2022001-eng.pdf))
2. Cooperative Patent Classification - C23F Definitions
   · Taxonomy evidence: C23F recognizes inhibitors applied to metal surfaces and distinguishes them from protective coating classifications and inhibitors added to pickling products. This supports a bounded surface-preservation category. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC23F.html))
3. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

4. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
5. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
6. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

7. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

· Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

8. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

9. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

10. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

11. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

12. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

13. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

14. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

15. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

16. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

17. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

18. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

19. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
20. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

21. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
22. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
23. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

24. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
25. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
26. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
27. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
28. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
29. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

7.10. Conditioners and Activators

Table 33. Global Chemical Surface Treatment Market Size, by Conditioners and Activators, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 34. Global Chemical Surface Treatment Market Size, by Conditioners and Activators, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 35. Global Chemical Surface Treatment Market Size, by Conditioners and Activators, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Cooperative Patent Classification - C23C Scheme

   · Taxonomy evidence: C23C xx.xx/xx.xx includes chemical activation and sensitization before coating; C23C xx.xx/xx.xx separately identifies pretreatment before conversion coating. These classification distinctions support a preparatory conditioning and activation function. Excluding cleaning, etching, bonding promoters, and fluxes from this peer is the present analytical allocation rule. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/cpc-C23C.html))

2. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
4. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
5. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
6. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

7. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

8. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

9. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

10. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

11. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

12. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

13. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

14. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

15. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

16. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

17. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

18. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
19. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

20. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
21. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
22. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

23. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
24. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
25. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
26. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
27. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
28. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

7.11. Sealing Chemicals

Table 36. Global Chemical Surface Treatment Market Size, by Sealing Chemicals, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 37. Global Chemical Surface Treatment Market Size, by Sealing Chemicals, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 38. Global Chemical Surface Treatment Market Size, by Sealing Chemicals, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Cooperative Patent Classification - C25D Scheme
   · Taxonomy evidence: Pore sealing and sealing-layer after-treatments receive distinct classification entries. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/cpc-C25D.html))
2. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
4. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
5. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
6. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

7. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

8. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

9. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

10. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

11. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

12. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

13. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

14. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

15. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

16. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

17. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

18. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
19. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

20. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
21. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
22. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

23. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
24. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
25. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
26. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
27. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
28. SurTec - Value-added Anodizing Portfolio
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting. ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting. ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

7.12. Anodizing Chemicals

Table 39. Global Chemical Surface Treatment Market Size, by Anodizing Chemicals, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 40. Global Chemical Surface Treatment Market Size, by Anodizing Chemicals, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 41. Global Chemical Surface Treatment Market Size, by Anodizing Chemicals, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Metal Finishing Effluent Guidelines - U.S. EPA
   - Taxonomy evidence: Anodizing is explicitly identified as a core operation separate from plating and chemical etching. ([epa.gov](https://www.epa.gov/eg/metal-finishing-effluent-guidelines))
2. Cooperative Patent Classification - C25D Scheme
   - Taxonomy evidence: The C25D scheme distinguishes anodizing from its pretreatment and after-treatment categories, supporting separate allocation of anodizing-line consumables by function. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/cpc-C25D.html))
3. ISO 7599:2018 - Decorative and Protective Anodic Oxidation Coatings
   - Taxonomy evidence: ISO xx.xx:2018 recognizes decorative and protective anodic oxidation coatings on aluminum and distinguishes pretreatment from the anodic coating specification. Its scope is narrower than all anodizing applications, so it supports category recognition rather than an exhaustive anodizing-product perimeter. ([iso.org](https://www.iso.org/standard/xx.xx.html?browse=ics))
4. MKS Inc. Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

5. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
6. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
7. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
8. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

9. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

10. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

11. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

12. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

13. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

14. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

15. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

16. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

17. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

18. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

19. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

20. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
21. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

22. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
23. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
24. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

25. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
26. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
27. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
28. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
29. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
30. SurTec - Value-added Anodizing Portfolio
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
      ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
      ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

7.13. Galvanizing Fluxes

Table 42. Global Chemical Surface Treatment Market Size, by Galvanizing Fluxes, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 43. Global Chemical Surface Treatment Market Size, by Galvanizing Fluxes, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 44. Global Chemical Surface Treatment Market Size, by Galvanizing Fluxes, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. OSHA SIC Manual - Industry 2899

   · Taxonomy evidence: The official SIC xx.xx description explicitly lists galvanizing fluxes among manufactured chemical preparations. This establishes a recognized chemical-goods family independently of coating-service activity. Limiting this category to galvanizing surface-preparation consumables is the present boundary decision. ([osha.gov](https://www.osha.gov/sic-manual/xx.xx))

2. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
4. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
5. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
6. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

7. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

8. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

9. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

10. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

11. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

12. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

13. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

14. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

15. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

16. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

17. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

18. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
19. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

20. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
21. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
22. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

23. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
24. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
25. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
26. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
27. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
28. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))

7.14. Colorants and Coloring Additives

Table 45. Global Chemical Surface Treatment Market Size, by Colorants and Coloring Additives, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 46. Global Chemical Surface Treatment Market Size, by Colorants and Coloring Additives, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 47. Global Chemical Surface Treatment Market Size, by Colorants and Coloring Additives, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Cooperative Patent Classification - C25D Scheme
   · Taxonomy evidence: The scheme separately identifies coloring after-treatments and treatments using organic dyes. ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/cpc-C25D.html))
2. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
4. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
5. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
6. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

7. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

8. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

9. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

10. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

11. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

12. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

13. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

14. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

15. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

16. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

17. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

18. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
19. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

20. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
21. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
22. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

23. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
24. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
25. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
26. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
27. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
28. SurTec - Value-added Anodizing Portfolio
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions. ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions. ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

8. Chemical Surface Treatment Market, by Treatment Platform

Treatment Platform should be assessed at the chemical-purchase level rather than inferred from the identity of an entire finishing installation. The European Commission's published industry reference describes installations combining chemical and electrolytic activities. ■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■ ■■■ ■■■■■■■■■■■■■■ ■■■■■■■■■■■ ■■■■■■■■ ■■■■■ ■■■ ■■■■■■■■■ ■■■ ■■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■■■■ ■■■■■ ■■■■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■ ■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■ ■■ ■■■ ■■■■■■■■■■ ■■■■■ ■■■■■■■■■ ■■■ ■■■■■■■■■■■■ ■■■■■■■■■ ■■ ■■■ ■■■■■■■■■■ ■■■■■ ■■■■■■ ■■■■■■■■■■■■

The commercial alternatives also extend beyond superficially similar product functions. Atotech markets Printoganth electroless-copper offerings within Nonelectrolytic Chemical Treatment, while its DynaChrome Plus proposition combines equipment and chemistry for an electrolytic application. ■■■■■ ■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■■■■ ■■■ ■ ■■■■■■■■■ ■■■■■■■■■■ ■■ ■■■■■■■■ ■■■■■■■■■ ■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■ ■■■■■■ ■■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■■■■■ ■■■■■■ ■■■■■■■■ ■■■■■■■■ ■■■■■■■■ ■■ ■■■■■■■■ ■■ ■■ ■■ ■■■■■■■■■ ■■■■■■■■■■■■

For an incumbent buyer, replacing a chemical within an accepted platform and changing an integrated supplier relationship are different decisions. ■■■ ■■■■■■ ■■■ ■■■■■■■■ ■■■■ ■■ ■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■ ■■■ ■■■■■■ ■■■ ■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■ ■■■ ■■■■■■■■■ ■■ ■■■■■■■■■■ ■■■■■ ■■■■■ ■■■■■■■■■■■■ ■■■■■■■ ■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■ ■ ■■■■■■■■ ■■■■■■■■■■■ ■■■■ ■■■ ■■■■■■■■■ ■■■■■■■■ ■■ ■■■ ■■■■■■■■ ■■■■■■■■ ■■■ ■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■■■ ■■■ ■■■■■■■ ■■■■■■■■■■■■■■ Platform labels alone establish neither a switching barrier nor freedom to switch.

Figure 10. Global Chemical Surface Treatment Market Size, by Treatment Platform, 2025 (%)

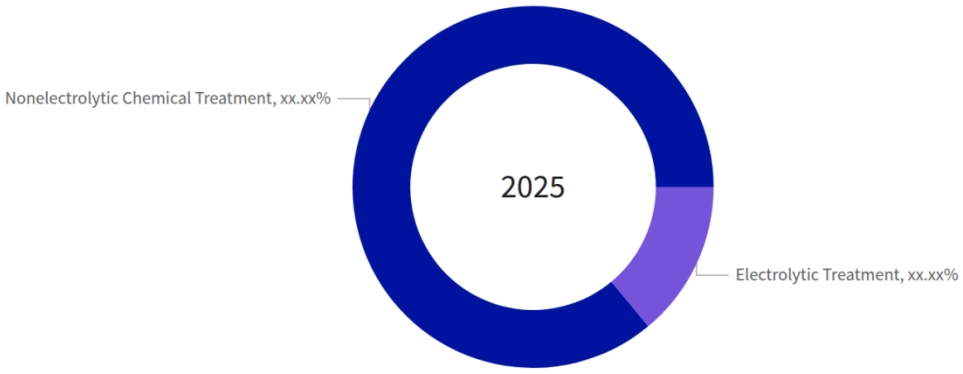

Figure 11. Global Chemical Surface Treatment Market, by Treatment Platform, 2032 (USD Million)

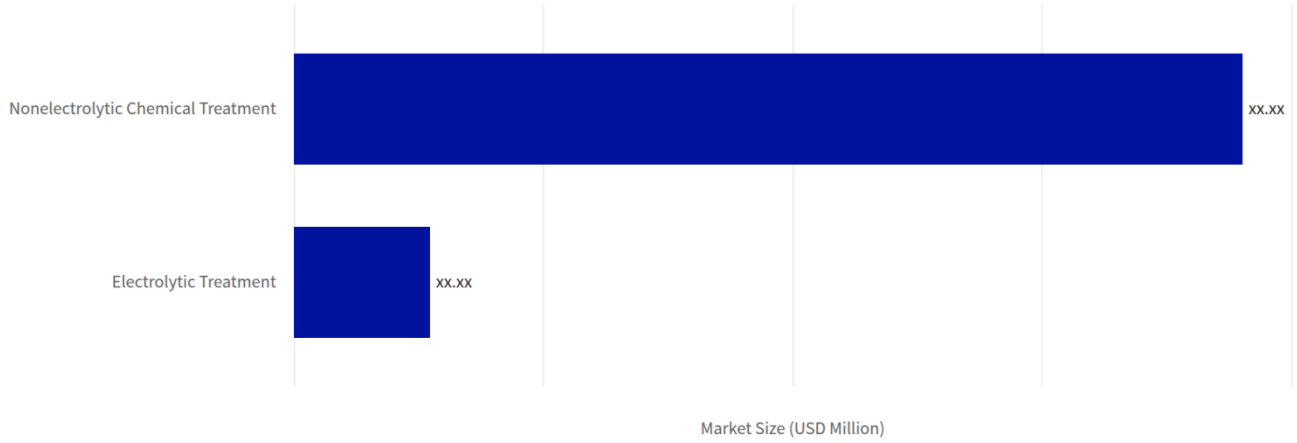

Table 48. Global Chemical Surface Treatment Market, by Treatment Platform growth contribution, 2025-2032

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Scope total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 49. Global Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Pretreatment solutions

   · The portfolio distinguishes soak cleaners from electrocleaners and immersion from electrolytic stripping offerings. Preparation and removal functions therefore cross the platform distinction. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/pretreatment/))

2. Surface Treatment of Metals and Plastics

· The European Commission's industry reference describes installations combining chemical and electrolytic activities. This supports purchase-level platform analysis rather than assigning an entire installation exclusively to one platform.
([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))

· Taxonomy evidence: The European industrial reference explicitly covers electrolytic and chemical surface treatment of metals and plastics and notes that installations can contain both. This supports the two-platform distinction; assigning individual chemical purchases by their own treatment step is an analytical inference.
([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution.
([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution.
([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight.
([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight.
([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))

3. Wear resistance

· Atotech advertises DynaChrome Plus as a combination of equipment and chemistry tailored to complement each other. This establishes an integrated proposition, not contractual exclusivity.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/))

4. Desmear and metallization

· The advertised electroless-copper portfolio establishes a nonelectrolytic deposition example; nonelectrolytic treatment is therefore not synonymous with cleaning.
([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion.
([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion.
([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

5. Cooperative Patent Classification - C25F Definitions

· Taxonomy evidence: C25F recognizes electrolytic cleaning, oxide removal, etching, polishing, and coating stripping. Consequently, electrolytic treatment is not synonymous with metal deposition; the platform can cross several product functions.
([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC25F.html))

6. ASTM A967/A967M-25 - Chemical Passivation of Stainless Steel Parts

· Taxonomy evidence: Recognition of chemical and electrochemical alternatives for the same passivation function supports treating purchased function and treatment platform as separate axes.
([store.astm.org](https://store.astm.org/a0967_a0967m-xx.xx.html))

7. MKS Inc. Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
8. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
9. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
10. BASF Report 2025
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
11. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
    - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
12. Nihon Parkerizing Integrated Report 2025
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))
13. Nippon Paint Holdings - Our Business Areas
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

14. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

15. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

16. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

17. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

18. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

19. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

20. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

21. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

22. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

23. MKS Inc. Annual Report 2025

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

8.1. Nonelectrolytic Chemical Treatment

Table 50. Global Chemical Surface Treatment Market Size, by Nonelectrolytic Chemical Treatment, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 51. Global Chemical Surface Treatment Market Size, by Nonelectrolytic Chemical Treatment, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 52. Global Chemical Surface Treatment Market Size, by Nonelectrolytic Chemical Treatment, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Cooperative Patent Classification - C23G Definitions
   · Taxonomy evidence: C23G explicitly concerns chemical cleaning and degreasing other than electrolysis and refers electrolytic equivalents to C25F.
   ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC23G.html))
2. Cooperative Patent Classification - C23C Definitions
   · Taxonomy evidence: The electroless-plating definition expressly excludes external electrical power, supporting its placement in the nonelectrolytic peer despite its deposition function.
   ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC23C.html))

3. European Commission JRC - Surface Treatment of Metals and Plastics
   - Taxonomy evidence: Chemical treatment is explicitly recognized alongside electrolytic treatment within the reference's industrial scope. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
4. MKS Inc. Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
5. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
6. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

7. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

8. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

9. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

10. Nippon Paint Holdings - Our Business Areas

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

11. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

12. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

13. Freudenberg Chemical Specialities - Business Portfolio and Numbers

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

14. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

15. Internal Revenue Service - Yearly Average Currency Exchange Rates
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))
16. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25
    - Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
17. SEMI Materials Market Data Subscription - Coverage and Methodology
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))
18. Entegris, Inc. Form 10-K for the year ended December 31, 2025
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))
19. BASF Completes Acquisition of Chemetall - December 15, 2016
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

20. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
21. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

22. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
23. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
24. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

25. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
26. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
27. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
28. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
29. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
30. MKS Inc. Annual Report 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

31. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

8.2. Electrolytic Treatment

Table 53. Global Chemical Surface Treatment Market Size, by Electrolytic Treatment, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 54. Global Chemical Surface Treatment Market Size, by Electrolytic Treatment, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 55. Global Chemical Surface Treatment Market Size, by Electrolytic Treatment, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Cooperative Patent Classification - C25F Definitions
   · Taxonomy evidence: The C25F scope establishes a recognized electrolytic material-removal platform distinct from its referenced chemical-treatment classifications.
   ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/defC25F.html))
2. Cooperative Patent Classification - C25D Scheme
   · Taxonomy evidence: C25D recognizes electrolytic deposition and anodizing while separately identifying chemical after-treatment, supporting treatment-step rather than whole-line platform allocation.
   ([uspto.gov](https://www.uspto.gov/web/patents/classification/cpc/html/cpc-C25D.html))

3. European Commission JRC - Surface Treatment of Metals and Plastics

   · Taxonomy evidence: Electrolytic treatment is explicitly recognized as a platform that can coexist with chemical treatment in one installation. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))

4. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

5. Element Solutions Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

   · Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

   · Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.

6. Henkel Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

7. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

8. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

9. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

10. Nippon Paint Holdings - Our Business Areas

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

11. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

12. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

13. Freudenberg Chemical Specialities - Business Portfolio and Numbers

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

14. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

15. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

16. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

17. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

18. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

19. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

20. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
21. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

22. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
23. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
24. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

25. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
26. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
27. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
28. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
29. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
30. MKS Inc. Annual Report 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

9. Chemical Surface Treatment Market, by Treatment Objective

Treatment Objective determines which requirements must be preserved when comparing suppliers, even when one chemical serves several purposes. ■■■■■■ ■■■■■■■ ■■■■■■■■■ ■■■■■ ■■■■ ■■ ■■■ ■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■■ ■■■ ■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■ ■■■■■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■ ■■■■■■ ■■ ■■■■■■■ ■■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■■ ■■■■ ■■■■■■■■■ ■ ■■■■ ■■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■■■■ ■■■■■■■■■ ■■■■■■■■■■■ ■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■■■■ Buyers should establish the contractually required combination of properties before accepting a replacement justified by only one advertised benefit.

Wear and Friction Performance and Appearance and Optical Performance can produce different shortlists within the same end-use setting. ■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■■ ■■■■■■■■■■■■■ ■■■■■■■■■■ ■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■ ■■■ ■■■■■■■■■■■■ ■■■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■ ■■■ ■ ■■■■■■■■■■ ■■■■■ ■■■■■■■■■■■ Procurement should identify whether acceptance rests with appearance requirements, functional requirements, or both; consolidating these purchases is appropriate only when the proposed offering covers the complete accepted requirement.

Surface Cleanliness and Contamination Control should likewise remain distinct from Dimensional and Surface Texture Control. ISO xx.xx:2018 addresses documented particulate-cleanliness requirements for road-vehicle components and excludes grease and oil films from its scope. ■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■ ■■■■■■■■■ ■■■ ■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■ ■ ■■■■■■ ■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■■ ■■■ ■■■■■■ ■■■■■■■■■■■ ■■ ■■■■■■■■ ■■■■■■■■■■■ ■■■■■■■ ■■■■■ ■■■■■ ■ ■■■■■■■■ ■■■■■■■■■ ■■■■■■ ■■ ■■■■■■■■■ ■■ ■■■■■■■■■■■■ ■■ ■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■ ■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■■

Thermal Management requires program-specific commercial evidence. NASA's 2004 thermal-control guidance recognizes anodized surfaces and mission-dependent selection among different finishes. ■■■■ ■■■■■■■■■■■ ■■ ■■■■■■■■■■■ ■■■■■■■■ ■■■ ■ ■■■■■■■■ ■■■■■■■■■■■■■■■ ■■■■■■■ ■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■■■ ■■■ ■■■■■ ■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■ ■ ■■■■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■ ■■■■ ■■■ ■■■■■■■■■ ■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■

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cleaning portfolio nor an implant-surface standard alone establishes that relationship or a biological benefit.

Figure 12. Global Chemical Surface Treatment Market Size, by Treatment Objective, 2025 (%)

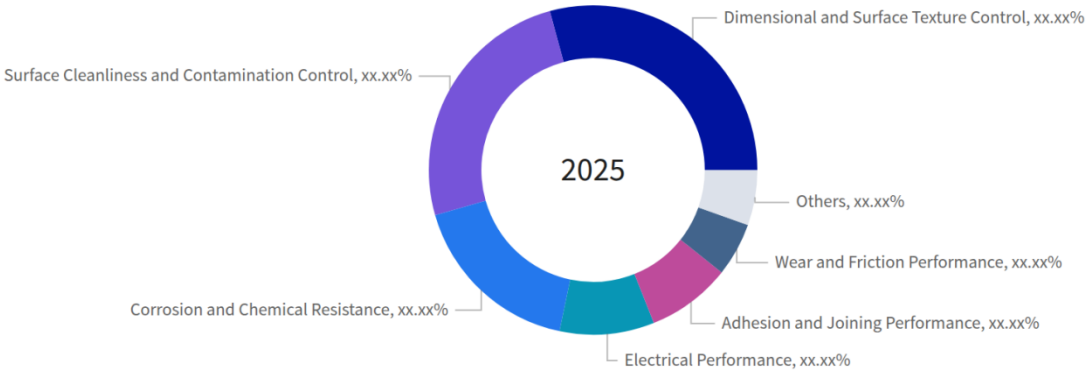

Figure 13. Global Chemical Surface Treatment Market, by Treatment Objective, 2032 (USD Million)

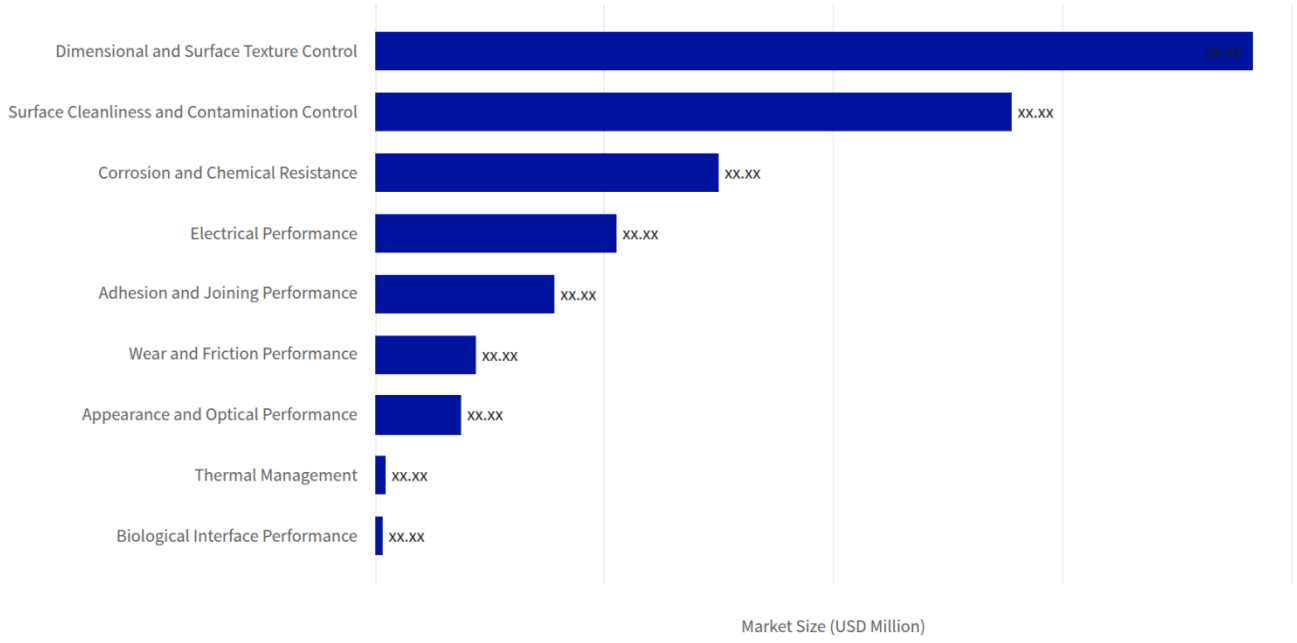

Table 56. Global Chemical Surface Treatment Market, by Treatment Objective growth contribution, 2025-2032

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Scope total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 57. Global Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. BONDERITE M-NT 2040 R2
   · Henkel markets BONDERITE M-NT 2040 R2 for adhesive bonding, corrosion resistance, and electrical-surface-resistance stability. These are supplier-advertised objectives, not article-specific acceptance. ([next.henkel-adhesives.com](https://next.henkel-adhesives.com/us/en/products/surface-treatments/central-pdp.html/bonderite-m-nt-2040-r2/BP1990142.html))
2. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys
   · MIL-DTL-81706B with Amendment xx.xx dated May xx.xx 2006, distinguishes corrosion-protection classes, including protection where low electrical resistance is required. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))
3. ISO 16232:2018 - Road vehicles - Cleanliness of components and systems
   · ISO xx.xx:2018 addresses documented particulate-cleanliness requirements for functionally relevant road-vehicle components and excludes grease and oil films from its scope. ([iso.org](https://www.iso.org/standard/xx.xx.html))
4. ISO 15730:2023 - Electropolishing as a means of smoothing and passivating stainless steel
   · ISO xx.xx:2023 identifies purchaser-to-finisher information and requirements for smoothing and passivating specified stainless-steel alloys. It supports a bounded surface-texture objective. ([iso.org](https://www.iso.org/standard/xx.xx.html))
5. Household appliances
   · Atotech's appliance portfolio separately describes decorative finishes and wear-resistant offerings, supporting different purchasing objectives within one end-use setting. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/household-appliances/))

6. An Overview of Thermal Control Coatings and Environmental Effects

   · NASA's September xx.xx 2004 guidance recognizes anodized thermal-control surfaces and mission-dependent selection among multiple finishes. It supplies historical application context, not a present chemical-supply award. ([tfaws.nasa.gov](https://tfaws.nasa.gov/TFAWS04/Website/program/Speakers/CoatingsTFAWSSeminar090304 1.pdf))

7. ISO 17327-1:2018 - Non-active surgical implants - Implant coating - Part 1: General requirements

   · ISO xx.xx-xx.xx:2018 covers surface coatings and surface modifications for non-active surgical implants. Its scope does not independently identify a separately supplied treatment-chemical purchasing relationship. ([iso.org](https://www.iso.org/standard/xx.xx.html?browse=ics))

8. Borer Industry

   · Borer advertises deconex MT cleaning products for implants and instruments. This is a cleanliness proposition, not evidence of a biological-interface benefit. ([borer.swiss](https://www.borer.swiss/en/industry))

9. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

   · Taxonomy evidence: The document distinguishes intended surface properties from customer industries, supporting separate analytical objective and industry axes. It does not establish the report's chemical-sales denominator. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))

10. MKS Inc. Annual Report 2025

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

11. Element Solutions Inc. Form 10-K for the year ended December 31, 2025

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

    · Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

    · Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

12. Henkel Annual Report 2025

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

13. BASF Report 2025

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

14. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products.
([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

· Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption.
([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

15. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction.
([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

16. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion.
([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

17. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation.
([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share.
([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share.
([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition.
([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition.
([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

18. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments.
([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

19. Freudenberg Chemical Specialities - Business Portfolio and Numbers
· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))
20. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals
· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))
21. Internal Revenue Service - Yearly Average Currency Exchange Rates
· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

22. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical and ancillary category dollars anchor the modeled cleanliness numerator; their purpose fractions are assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical and ancillary category dollars anchor the modeled cleanliness numerator; their purpose fractions are assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP and wet-chemical category dollars constrain the dimensional numerator after pads and other excluded products are removed. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP and wet-chemical category dollars constrain the dimensional numerator after pads and other excluded products are removed. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

23. SEMI Materials Market Data Subscription - Coverage and Methodology

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

24. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

25. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

26. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

27. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

28. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))

9.1. Dimensional and Surface Texture Control

Table 58. Global Chemical Surface Treatment Market Size, by Dimensional and Surface Texture Control, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 59. Global Chemical Surface Treatment Market Size, by Dimensional and Surface Texture Control, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 60. Global Chemical Surface Treatment Market Size, by Dimensional and Surface Texture Control, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

   · Taxonomy evidence: The glossary recognizes dimensions as a purpose of electroplating. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))

2. ISO 15730:2023 - Metallic and Other Inorganic Coatings - Electropolishing as a Means of Smoothing and Passivating Stainless Steel

   · Taxonomy evidence: ISO xx.xx:2023 recognizes smoothing of stainless-steel surfaces as a specified finishing purpose and addresses information supplied by the purchaser to the finisher. It supports surface-texture requirements, not a measured market for all dimensional-restoration chemicals. ([iso.org](https://www.iso.org/standard/xx.xx.html?browse=tc))

3. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

4. Element Solutions Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

   · Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

   · Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.

5. Henkel Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

6. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

7. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products.
([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

· Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption.
([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

8. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction.
([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

9. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion.
([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

10. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation.
([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition.
([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition.
([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

11. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments.
([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

12. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue.
([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

13. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

14. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

15. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP and wet-chemical category dollars constrain the dimensional numerator after pads and other excluded products are removed. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP and wet-chemical category dollars constrain the dimensional numerator after pads and other excluded products are removed. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

16. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

17. Entegris, Inc. Form 10-K for the year ended December 31, 2025
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))
18. BASF Completes Acquisition of Chemetall - December 15, 2016
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))
19. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.

20. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
21. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.

22. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
23. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
24. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
25. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
26. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.

27. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
28. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
29. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))

9.2. Surface Cleanliness and Contamination Control

Table 61. Global Chemical Surface Treatment Market Size, by Surface Cleanliness and Contamination Control, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 62. Global Chemical Surface Treatment Market Size, by Surface Cleanliness and Contamination Control, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 63. Global Chemical Surface Treatment Market Size, by Surface Cleanliness and Contamination Control, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. ISO 16232:2018 - Road Vehicles - Cleanliness of Components and Systems

   · Taxonomy evidence: ISO xx.xx:2018 recognizes documented technical-cleanliness requirements for functionally relevant road-vehicle components and systems, including incoming and outgoing components. Its scope concerns particulate contamination and excludes grease and oil films. This supports an independent cleanliness objective without establishing all residue-related applications. ([iso.org](https://www.iso.org/standard/xx.xx.html?browse=ics))

2. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

   · Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

   · Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.

4. Henkel Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

5. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

6. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
7. Nihon Parkerizing Integrated Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))
8. Nippon Paint Holdings - Our Business Areas
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))
9. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
10. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))
11. Freudenberg Chemical Specialities - Business Portfolio and Numbers
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))
12. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))
13. Internal Revenue Service - Yearly Average Currency Exchange Rates
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

14. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical and ancillary category dollars anchor the modeled cleanliness numerator; their purpose fractions are assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical and ancillary category dollars anchor the modeled cleanliness numerator; their purpose fractions are assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

15. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

16. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

17. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

18. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
19. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

20. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
21. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
22. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

23. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
24. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
25. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
26. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
27. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
28. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))

9.3. Corrosion and Chemical Resistance

Table 64. Global Chemical Surface Treatment Market Size, by Corrosion and Chemical Resistance, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 65. Global Chemical Surface Treatment Market Size, by Corrosion and Chemical Resistance, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 66. Global Chemical Surface Treatment Market Size, by Corrosion and Chemical Resistance, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006
   · Taxonomy evidence: The executive summary identifies corrosion prevention as a treatment purpose. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))
2. ISO - ICS 25.220.20: Surface Treatment
   · Taxonomy evidence: ISO's surface-treatment classification lists standards addressing corrosion and chemical resistance of treated surfaces, supporting those requirements as distinct performance characteristics. ([iso.org](https://www.iso.org/ics/xx.xx.xx.xx/x/))
3. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

4. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
5. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
6. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
7. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

8. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

9. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

10. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

11. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

12. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

13. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

14. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

15. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

    · Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

    · Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

    · Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

    · Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

16. SEMI Materials Market Data Subscription - Coverage and Methodology

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

17. Entegris, Inc. Form 10-K for the year ended December 31, 2025

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

18. BASF Completes Acquisition of Chemetall - December 15, 2016

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

19. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
20. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

21. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
22. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
23. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

24. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
25. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
26. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
27. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
28. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.

9.4. Electrical Performance

Table 67. Global Chemical Surface Treatment Market Size, by Electrical Performance, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 68. Global Chemical Surface Treatment Market Size, by Electrical Performance, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 69. Global Chemical Surface Treatment Market Size, by Electrical Performance, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys, May 2, 2006

   · Taxonomy evidence: Class xx.xx explicitly recognizes corrosion protection combined with low electrical resistance, supporting an electrical-contact requirement without establishing sales allocations. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

2. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

   · Taxonomy evidence: Chapter xx.xx identifies conductivity and electronic circuit interconnection requirements. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))

3. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

4. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
5. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
6. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
7. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

8. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

9. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

10. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

11. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

12. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

13. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

14. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

15. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

16. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

17. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

18. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

19. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
20. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

21. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
22. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
23. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

24. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
25. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
26. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
27. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
28. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.

9.5. Adhesion and Joining Performance

Table 70. Global Chemical Surface Treatment Market Size, by Adhesion and Joining Performance, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 71. Global Chemical Surface Treatment Market Size, by Adhesion and Joining Performance, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 72. Global Chemical Surface Treatment Market Size, by Adhesion and Joining Performance, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. European Commission Decision M.7498 - Compagnie de Saint-Gobain/Sika, July 22, 2015

   · Taxonomy evidence: Paragraph xx.xx distinguishes glass surface-treatment products from the subsequently applied adhesive and describes their adhesion-related purpose. This supports an adhesion objective separately from purchased chemical function and substrate. ([ec.europa.eu](https://ec.europa.eu/competition/mergers/cases/decisions/m7498_20150722_20310_4457021_EN.pdf))

2. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

   · Taxonomy evidence: The executive summary identifies adhesion to subsequent treatments; Section xx.xx.xx.xx also recognizes solderability preservation. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))

3. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

4. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
5. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
6. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
7. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

8. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

9. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

10. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

11. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

12. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

13. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

14. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

15. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

16. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

17. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

18. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

19. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
20. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

21. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
22. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
23. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

24. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
25. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
26. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
27. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
28. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.

9.6. Wear and Friction Performance

Table 73. Global Chemical Surface Treatment Market Size, by Wear and Friction Performance, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 74. Global Chemical Surface Treatment Market Size, by Wear and Friction Performance, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 75. Global Chemical Surface Treatment Market Size, by Wear and Friction Performance, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. ISO - ICS 25.220.20: Surface Treatment

   · Taxonomy evidence: The classification lists standards addressing abrasion resistance of anodic coatings and friction characteristics of chemical conversion coatings. These establish performance categories, not treatment instructions or purchasing volumes. ([iso.org](https://www.iso.org/ics/xx.xx.xx.xx/x/))

2. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
4. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
5. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
6. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

7. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

8. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

9. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

10. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

11. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

12. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

13. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

14. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

15. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

16. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

17. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

18. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
19. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

20. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
21. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
22. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

23. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
24. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
25. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
26. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
27. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
28. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

9.7. Appearance and Optical Performance

Table 76. Global Chemical Surface Treatment Market Size, by Appearance and Optical Performance, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 77. Global Chemical Surface Treatment Market Size, by Appearance and Optical Performance, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 78. Global Chemical Surface Treatment Market Size, by Appearance and Optical Performance, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. ISO - ICS 25.220.20: Surface Treatment
   - Taxonomy evidence: The classification separately recognizes decorative anodic coatings, appearance conventions, reflectance, gloss, and image clarity. ([iso.org](https://www.iso.org/ics/xx.xx.xx.xx/x/))
2. MKS Inc. Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
4. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
5. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
6. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

7. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

8. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

9. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

10. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

11. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

12. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

13. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

14. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

15. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

16. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

17. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

18. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
19. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

20. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
21. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
22. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

23. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
24. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
25. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
26. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
27. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.

9.8. Thermal Management

Table 79. Global Chemical Surface Treatment Market Size, by Thermal Management, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 80. Global Chemical Surface Treatment Market Size, by Thermal Management, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 81. Global Chemical Surface Treatment Market Size, by Thermal Management, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. NASA - 7.0 Thermal Control

   · Taxonomy evidence: NASA identifies anodized surfaces among spacecraft thermal-control surface finishes. This establishes a thermal-management use case without bringing thermal hardware, tapes, or standalone paints into the chemical market. ([nasa.gov](https://www.nasa.gov/smallsat-institute/sst-soa/thermal-control/))

2. Development Document for the Final Effluent Limitations Guidelines and Standards for the Metal Products and Machinery Point Source Category - 2003

   · Taxonomy evidence: The anodizing discussion recognizes heat-transfer requirements alongside corrosion resistance, supporting a separate thermal objective. ([epa.gov](https://www.epa.gov/sites/default/files/2015-xx.xx/documents/mp-m_dd_2003.pdf))

3. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

4. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
5. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
6. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
7. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

8. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

9. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

10. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

11. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

12. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

13. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

14. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

15. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

16. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

17. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

18. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

19. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
20. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

21. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
22. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
23. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

24. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
25. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
26. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
27. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
28. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.

9.9. Biological Interface Performance

Table 82. Global Chemical Surface Treatment Market Size, by Biological Interface Performance, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 83. Global Chemical Surface Treatment Market Size, by Biological Interface Performance, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 84. Global Chemical Surface Treatment Market Size, by Biological Interface Performance, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. ISO 17327-1:2018 - Non-Active Surgical Implants - Implant Coating - Part 1: General Requirements

   · Taxonomy evidence: ISO xx.xx-xx.xx:2018 covers intentional surface modifications as well as coatings on non-active surgical implants and recognizes intended functions involving biological fixation and tissue interaction. This supports a biological-interface requirement category, but not clinical efficacy, authorization, or sales of in-scope treatment chemicals.
   ([iso.org](https://www.iso.org/obp/ui?_escaped_fragment_=iso%3Astd%3Aiso%3A17327%3A-xx.xx%3Aed-xx.xx%3Av1%3Aen))

2. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion.
   ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
4. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
5. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
6. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

7. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

8. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

9. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

10. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

11. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

12. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

13. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

14. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

15. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

16. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

17. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

18. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
19. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

20. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
21. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
22. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

23. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
24. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
25. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
26. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
27. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
28. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

29. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

10. Chemical Surface Treatment Market, by End-Use Industry

End-use targeting should follow the article and its acceptance relationship rather than a supplier's industry list. ■■ ■■■■ ■■■■■■■■■ ■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■ ■■■■■■■ ■■■ ■■■■■■■■■ ■■■■■■■■ ■■ ■■■■■■■ ■■■■■■■■■■ ■■ ■■■■■■■ ■■■■■■■■■ ■■■ ■■■■■■■ ■■■■■ ■■■■■■ ■■■■■ ■■■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■■■ ■■■■■■■■■■■■■ A supplier seeking these accounts must distinguish an advertised application from recognition under the customer's actual requirements; participation in one program does not establish access to another.

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■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■ ■■■ ■■■■■■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■■■■■ ■■■ ■■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■ ■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■ ■■■■ ■■■■■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■■ ■■■ ■■■■■■■■■ ■■■■ ■■■■■ ■■■■■■■ ■■■■■■■ Tool reconditioning, architectural finishing, and can-manufacturing cleaning are distinct commercial purposes. A supplier can pursue more than one only where its named products and accountable support fit each application; a broad industrial portfolio is not sufficient evidence of that fit.

■■■ ■■■■■■■ ■■■ ■■■■■■ ■■■■■■■■ ■■■■■■■ ■■■■■■■■■■■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■■ ■ ■■■■■■■■■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■ ■■■■ ■■■■■■■■ ■■■ ■■■■■ ■■■■■■■ ■■■■■■■■■ ■■■ ■■■■■■■■■■■■ ■■■■■ ■■■■■ ■■■■■■■■■ ■■■■■■■ ■■■■■■■■■■■■■■ ■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■ ■■■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■ ■■■■■■■ ■■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■■ These examples favor application-specific selling over a uniform consumer-goods proposition. The relevant manufacturer or finishing purchaser must establish the offering's acceptance; medical, indoor-appliance, and outdoor-use claims are not transferable between these settings.

Within Jewelry, Personal Accessories, and Coinage, Atotech's fashion and jewelry applications differ from the denomination-specific specifications published by The Royal Mint. ■■■■■■■■■ ■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■ ■■■ ■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■ ■■ ■■■■■■■■ ■■■■ ■■■■■■■■■■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■■■■ ■■■■■■ ■■■ ■■■■■■ ■■■■■■■■■■■■■■ The examples support distinct specification relationships, not a common approval system.

Printing and Graphic Arts can involve an integrated supplier commitment. K. Walter's HelioChrome NEO brochure combines gravure-specific chemicals, equipment, software, and service, initially directed toward European packaging printers. ▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪

Figure 14. Global Chemical Surface Treatment Market Size, by End-Use Industry, 2025 (%)

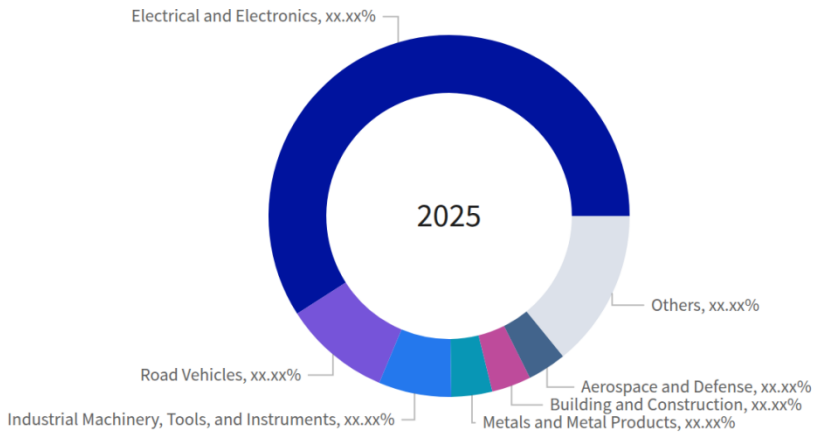

Figure 15. Global Chemical Surface Treatment Market, by End-Use Industry, 2032 (USD Million)

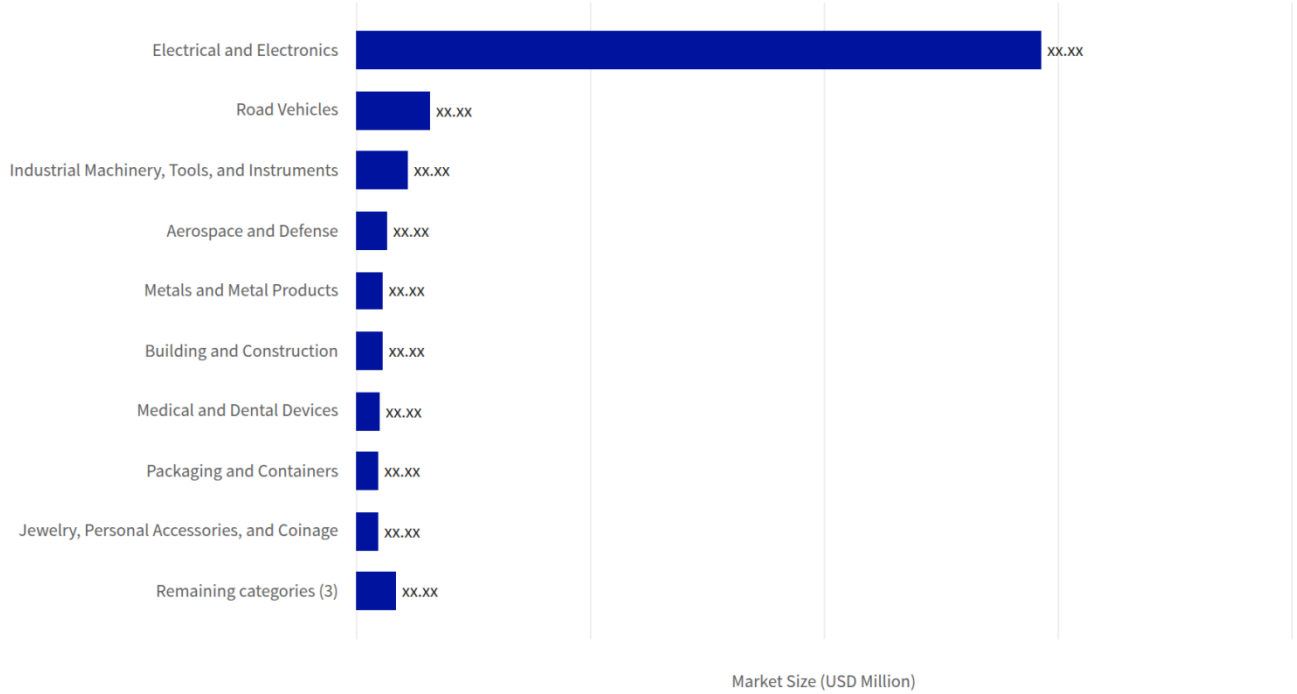

Table 85. Global Chemical Surface Treatment Market, by End-Use Industry growth contribution, 2025-2032

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Scope total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 86. Global Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. General Metal Finishing

   · Atotech advertises an automotive OEM-facing support interface, supplier-reported automotive approvals, and fashion and jewelry applications. These establish advertised relationships and applications, not transferable customer recognition.

2. Fujifilm Launches Advanced Packaging CMP Slurry

   · The announcement supports supplier-reported adoption, not transferable acceptance or a supply commitment at another buyer.

3. Terms and Conditions: Q020 - D1-4426 Approved Process Source

   · Boeing Q020, effective October xx.xx 2024, requires approved processing sources where D1-xx.xx applies, extends the clause into relevant subcontracts, and preserves the seller's purchase-contract responsibilities.

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

4. Household appliances

   · Atotech advertises household-appliance pretreatment, decorative finishing, corrosion-protection, and wear-resistance offerings. Their advertised applications do not establish acceptance by every appliance manufacturer.

5. Borer Industry

   · Borer advertises deconex de-coat chemicals for tool decoating and deconex MT cleaning agents for implant and instrument manufacturing. The advertised cleaning applications do not establish device authorization.

6. BONDERITE C-MC N DB

   · Henkel advertises BONDERITE C-MC N DB for maintenance cleaning of vehicle exteriors, expressly including railway stock and marine vessels.

7. Industries Overview

   · Chemetall identifies architectural aluminum finishing, aluminum-and-steel coil pretreatment, and pretreatment for outdoor furniture and playground equipment.

8. Henkel showcases smart digital equipment solutions and advanced material technologies at METPACK 2026

   · Henkel's March xx.xx 2026 announcement identifies the BONDERITE C-IC xx.xx cleaner series for can manufacturing, supporting a separable metal-packaging cleaning offering.

9. 1p Coin Designs and Specifications

   · The Royal Mint publishes denomination-specific designs and specifications for the one-penny coin. This establishes an article-specific specification context, not chemical-supplier approval.

10. HelioChrome NEO

    · K. Walter presents HelioChrome NEO as an integrated gravure offering combining chemicals, equipment, software, and service, initially directed toward European packaging-printing customers. The brochure does not establish chemical-only purchasing rights.

11. Metal Finishing Effluent Guidelines - U.S. EPA

    · Taxonomy evidence: EPA states that metal-finishing coverage is process-defined rather than restricted to one industrial sector, supporting the distinction between treatment activity and downstream industry. ([epa.gov](https://www.epa.gov/eg/metal-finishing-effluent-guidelines))

12. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

    · Taxonomy evidence: Section xx.xx treats surface finishing as cross-industry activity. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))

13. North American Industry Classification System - United States, 2022

    · Taxonomy evidence: The 2022 NAICS manual provides distinct product-industry definitions for metals, fabricated products, machinery, electrical equipment, transportation equipment, furniture, medical products, and consumer articles. The proposed sector aggregations are analytical adaptations, not a claim that NAICS measures treatment-chemical demand. ([census.gov](https://www.census.gov/naics/reference_files_tools/2022_NAICS_Manual.pdf))

14. MKS Inc. Annual Report 2025

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

15. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
    - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
    - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
16. Henkel Annual Report 2025
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
17. BASF Report 2025
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
18. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
    - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

19. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

20. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

21. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

22. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

23. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

24. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

25. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

26. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Slide xx.xx reports dated 2025 projections of USD xx.xx wet chemicals, USD xx.xx CMP materials and USD xx.xx ancillaries; only scope-adjusted chemical portions enter the inherited cohort. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Slide xx.xx reports dated 2025 projections of USD xx.xx wet chemicals, USD xx.xx CMP materials and USD xx.xx ancillaries; only scope-adjusted chemical portions enter the inherited cohort. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

27. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

28. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

29. BASF Completes Acquisition of Chemetall - December 15, 2016

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

30. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

    · Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

    · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

31. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

10.1. Electrical and Electronics

Table 87. Global Chemical Surface Treatment Market Size, by Electrical and Electronics, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 88. Global Chemical Surface Treatment Market Size, by Electrical and Electronics, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 89. Global Chemical Surface Treatment Market Size, by Electrical and Electronics, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Electrical and Electronic Components Effluent Guidelines - U.S. EPA
   · Taxonomy evidence: The page identifies semiconductors and electronic crystals as distinct industry settings and provides cross-category guidance concerning semiconductor facilities and metal finishing. Regulatory applicability therefore cannot substitute for the report's commercial product boundary. ([epa.gov](https://www.epa.gov/eg/electrical-and-electronic-components-effluent-guidelines))
2. Metal Finishing Effluent Guidelines - U.S. EPA
   · Taxonomy evidence: EPA identifies electrical and electronic machinery, equipment, and supplies among the industrial groups associated with metal-finishing facilities. ([epa.gov](https://www.epa.gov/eg/metal-finishing-effluent-guidelines))
3. Preliminary Review of the Metal Finishing Category - April 2018
   · Taxonomy evidence: The observed markets included electronics, explicitly including semiconductors. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
4. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

5. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
6. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
7. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

8. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

· Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

9. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

10. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

11. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

12. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026
    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))
    · Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))
    · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))
13. Freudenberg Chemical Specialities - Business Portfolio and Numbers
    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))
14. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals
    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))
15. Internal Revenue Service - Yearly Average Currency Exchange Rates
    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

16. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Slide xx.xx reports dated 2025 projections of USD xx.xx wet chemicals, USD xx.xx CMP materials and USD xx.xx ancillaries; only scope-adjusted chemical portions enter the inherited cohort. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Slide xx.xx reports dated 2025 projections of USD xx.xx wet chemicals, USD xx.xx CMP materials and USD xx.xx ancillaries; only scope-adjusted chemical portions enter the inherited cohort. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

17. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

18. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

19. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

20. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
21. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

22. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
23. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
24. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

25. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
26. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
27. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
28. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
29. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
30. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

10.2. Road Vehicles

Table 90. Global Chemical Surface Treatment Market Size, by Road Vehicles, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 91. Global Chemical Surface Treatment Market Size, by Road Vehicles, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 92. Global Chemical Surface Treatment Market Size, by Road Vehicles, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Preliminary Review of the Metal Finishing Category - April 2018
   · Taxonomy evidence: Markets served by the visited facilities included automotive customers. This establishes an observed use category, not a Global demand weight. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
2. ISO 16232:2018 - Road Vehicles - Cleanliness of Components and Systems
   · Taxonomy evidence: The standard connects cleanliness specifications to the automotive quality chain and identifies cleaning, surface treatment, and assembly as relevant manufacturing activities. ([iso.org](https://www.iso.org/standard/xx.xx.html?browse=ics))
3. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

4. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
5. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
6. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
7. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

8. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

9. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

10. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

11. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

12. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

13. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

14. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

15. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

16. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

17. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

18. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

19. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
20. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

21. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
22. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
23. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

24. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
25. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
26. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
27. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
28. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
29. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

10.3. Industrial Machinery, Tools, and Instruments

Table 93. Global Chemical Surface Treatment Market Size, by Industrial Machinery, Tools, and Instruments, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 94. Global Chemical Surface Treatment Market Size, by Industrial Machinery, Tools, and Instruments, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 95. Global Chemical Surface Treatment Market Size, by Industrial Machinery, Tools, and Instruments, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Metal Finishing Effluent Guidelines - U.S. EPA
   - Taxonomy evidence: EPA identifies machinery and measuring, analyzing, controlling, and optical-instrument industries among the industrial groups associated with metal-finishing facilities. This supports the machinery-and-instruments buyer grouping, not its demand weight. ([epa.gov](https://www.epa.gov/eg/metal-finishing-effluent-guidelines))
2. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006
   - Taxonomy evidence: Section xx.xx names heavy engineering and hardware customers. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))
3. MKS Inc. Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

4. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
5. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
6. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
7. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

8. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

9. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

10. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

11. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

12. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

13. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

14. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

15. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

16. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

17. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

18. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

19. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
20. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

21. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
22. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
23. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

24. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
25. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
26. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
27. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
28. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
29. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

10.4. Metals and Metal Products

Table 96. Global Chemical Surface Treatment Market Size, by Metals and Metal Products, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 97. Global Chemical Surface Treatment Market Size, by Metals and Metal Products, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 98. Global Chemical Surface Treatment Market Size, by Metals and Metal Products, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Development Document for the Final Effluent Limitations Guidelines and Standards for the Metal Products and Machinery Point Source Category - 2003

   · Taxonomy evidence: The document identifies continuously electroplated flat-steel products and steel forming and finishing as industrial treatment settings. This supports a mill-product demand category without counting metal-product revenue. ([epa.gov](https://www.epa.gov/sites/default/files/2015-xx.xx/documents/mp-m_dd_2003.pdf))

2. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.

4. Henkel Annual Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

5. BASF Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

6. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

· Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

7. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

8. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

9. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

10. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

11. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

12. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

13. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

14. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

15. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

16. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

17. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

18. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
19. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

20. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
21. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
22. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

23. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
24. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
25. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
26. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
27. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
28. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Steel semis receive xx.xx% in the old volume prior; broader metals purchasing and value adjustments are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Steel semis receive xx.xx% in the old volume prior; broader metals purchasing and value adjustments are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

10.5. Building and Construction

Table 99. Global Chemical Surface Treatment Market Size, by Building and Construction, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 100. Global Chemical Surface Treatment Market Size, by Building and Construction, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 101. Global Chemical Surface Treatment Market Size, by Building and Construction, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

   · Taxonomy evidence: Section xx.xx names construction and bathroom fittings. ([[bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf)](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))

2. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([[investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c)](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
4. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
5. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
6. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

7. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

8. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

9. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

10. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

11. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

12. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

13. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

14. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

15. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

16. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

17. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

18. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
19. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

20. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
21. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
22. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

23. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
24. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
25. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
26. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
27. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
28. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

10.6. Aerospace and Defense

Table 102. Global Chemical Surface Treatment Market Size, by Aerospace and Defense, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 103. Global Chemical Surface Treatment Market Size, by Aerospace and Defense, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 104. Global Chemical Surface Treatment Market Size, by Aerospace and Defense, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Preliminary Review of the Metal Finishing Category - April 2018
   · Taxonomy evidence: The observed markets included aircraft/aerospace and military customers. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
2. NASA - 7.0 Thermal Control
   · Taxonomy evidence: The spacecraft thermal-control discussion supplies public end-user context for surface finishes in space applications, independently of a chemical supplier's customer list. ([nasa.gov](https://www.nasa.gov/smallsat-institute/sst-soa/thermal-control/))
3. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

4. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
5. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
6. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
7. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

8. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

9. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

10. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

11. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

12. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

13. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

14. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

15. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

16. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

17. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

18. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

19. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
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    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
20. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

21. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
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    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
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    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
22. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
23. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

24. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
25. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
26. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
27. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
28. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
29. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

30. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

10.7. Household and Recreational Goods

Table 105. Global Chemical Surface Treatment Market Size, by Household and Recreational Goods, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 106. Global Chemical Surface Treatment Market Size, by Household and Recreational Goods, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 107. Global Chemical Surface Treatment Market Size, by Household and Recreational Goods, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

   · Taxonomy evidence: Section xx.xx names domestic appliances and furniture. ([[bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf)](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))

2. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([[investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c)](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
4. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
5. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
6. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

7. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

8. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

9. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

10. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

11. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

12. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

13. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

14. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

15. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

16. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

17. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

18. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
19. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

20. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
21. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
22. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

23. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
24. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
25. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
26. Chemetall - Africa locations
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    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
27. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
28. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

10.8. Jewelry, Personal Accessories, and Coinage

Table 108. Global Chemical Surface Treatment Market Size, by Jewelry, Personal Accessories, and Coinage, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 109. Global Chemical Surface Treatment Market Size, by Jewelry, Personal Accessories, and Coinage, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 110. Global Chemical Surface Treatment Market Size, by Jewelry, Personal Accessories, and Coinage, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006
   · Taxonomy evidence: Section xx.xx names jewelry, ornaments, and coinage. ([[bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf)](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))
2. Preliminary Review of the Metal Finishing Category - April 2018
   · Taxonomy evidence: The observed markets included jewelry, medals, trophies, and awards. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
3. From Blank to Bank - Online Exhibition | The Royal Mint Experience
   · Taxonomy evidence: The Royal Mint publicly identifies plated coins among its own manufactured products. This supplies direct buyer-side corroboration for coinage as a surface-treatment destination, without estimating chemical consumption or revenue. ([royalmint.com](https://www.royalmint.com/the-royal-mint-experience/explore-the-exhibition/from-blank-to-bank/))

4. MKS Inc. Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
5. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
6. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
7. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

8. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
9. Nihon Parkerizing Integrated Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))
10. Nippon Paint Holdings - Our Business Areas
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))
11. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
12. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))
13. Freudenberg Chemical Specialities - Business Portfolio and Numbers
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))
14. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))
15. Internal Revenue Service - Yearly Average Currency Exchange Rates
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

16. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

17. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

18. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

19. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

20. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
21. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

22. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
23. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
24. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

25. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
26. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
27. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
28. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
29. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
30. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

10.9. Packaging and Containers

Table 111. Global Chemical Surface Treatment Market Size, by Packaging and Containers, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 112. Global Chemical Surface Treatment Market Size, by Packaging and Containers, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 113. Global Chemical Surface Treatment Market Size, by Packaging and Containers, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006
   · Taxonomy evidence: Section xx.xx names food and drink containers. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))
2. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
4. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
5. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
6. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

7. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

8. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

9. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

10. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

11. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

12. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

13. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

14. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

15. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

16. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

17. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

18. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
19. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

20. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
21. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
22. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

23. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
24. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
25. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
26. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
27. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
28. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

10.10. Medical and Dental Devices

Table 114. Global Chemical Surface Treatment Market Size, by Medical and Dental Devices, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 115. Global Chemical Surface Treatment Market Size, by Medical and Dental Devices, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 116. Global Chemical Surface Treatment Market Size, by Medical and Dental Devices, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Preliminary Review of the Metal Finishing Category - April 2018
   · Taxonomy evidence: The observed markets included medical devices. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
2. ISO 17327-1:2018 - Non-Active Surgical Implants - Implant Coating - Part 1: General Requirements
   · Taxonomy evidence: The standard establishes surgical implants as a distinct application setting for specified surface modifications. Its broader implant-coating scope must not be substituted for chemical-consumables revenue. ([iso.org](https://www.iso.org/obp/ui?_escaped_fragment_=iso%3Astd%3Aiso%3A17327%3A-xx.xx%3Aed-xx.xx%3Av1%3Aen))
3. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

4. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
5. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
6. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
7. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

8. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

9. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

10. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

11. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

12. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

13. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

14. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

15. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

16. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

17. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

18. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

19. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
20. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

21. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
22. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
23. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

24. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
25. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
26. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
27. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
28. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
29. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

10.11. Rail and Marine Transportation

Table 117. Global Chemical Surface Treatment Market Size, by Rail and Marine Transportation, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 118. Global Chemical Surface Treatment Market Size, by Rail and Marine Transportation, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 119. Global Chemical Surface Treatment Market Size, by Rail and Marine Transportation, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

   · Taxonomy evidence: Table xx.xx includes treated marine-engine workpieces. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))

2. Development Document for the Final Effluent Limitations Guidelines and Standards for the Metal Products and Machinery Point Source Category - 2003

   · Taxonomy evidence: EPA's 2003 development document separately describes railroad overhaul and heavy-maintenance operations, including chemical cleaning and paint stripping. It also discusses shipyard settings; these are buyer contexts, not chemical-sales totals. ([epa.gov](https://www.epa.gov/sites/default/files/2015-xx.xx/documents/mp-m_dd_2003.pdf))

3. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

4. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
5. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
6. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
7. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

8. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

9. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

10. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

11. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

12. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

13. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

14. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

15. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

16. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

17. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

18. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

19. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
20. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

21. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
22. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
23. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

24. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
25. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
26. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
27. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
28. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
29. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

10.12. Printing and Graphic Arts

Table 120. Global Chemical Surface Treatment Market Size, by Printing and Graphic Arts, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 121. Global Chemical Surface Treatment Market Size, by Printing and Graphic Arts, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 122. Global Chemical Surface Treatment Market Size, by Printing and Graphic Arts, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

   · Taxonomy evidence: Section xx.xx names printing customers. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))

2. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
4. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
5. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
6. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

7. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

8. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

9. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

10. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

11. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

12. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

13. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

14. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

15. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

16. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

17. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

18. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
19. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

20. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
21. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
22. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

23. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
24. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
25. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
26. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
27. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
28. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

11. Chemical Surface Treatment Market, by Buyer Operating Model

Buyer Operating Model changes who purchases the chemicals and who is accountable for delivering the treated article, but it does not independently determine approval authority. PRI recognizes both internally manufacturing captive suppliers and suppliers performing processing as a service to others within Nadcap. ■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■ ■■■■ ■■■■■ ■■■ ■■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■■■ ■■■■ ■■■■■■■■■ ■■■ ■■■■■■■■■■■■ ■■ ■■■ ■■■■■■■■■ ■■■■■ ■■■■ ■■■■ ■■■■■■■■ ■■■■■ ■■■■■■■■■■ ■■■■■■■ ■■■■■■■■■■■■■■ ■■ ■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■■ ■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■ ■■■■ ■■■■■■■■■■■■■■ ■■■■■ ■■■ ■■■■■■■■ ■■■■■

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U.S. ■■■ ■■■■■ ■■■■■■■ ■■■■■■■■■■■ ■■■ ■■■ ■■■■■■■■■■ ■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■ ■■■■■■ ■■■ ■■ ■■■■■■■■■■ ■■■ ■■■■■■ ■■■■■■■■■■■■■ ■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■■■■ ■■■■ ■■■■■ ■■■■■■■ ■■■■■■■■■■ ■■■■■ ■■■ ■■■■■■■■■ ■■■■■■■■■■■ ■■■ ■■■■■■ ■■■■■■■■■ ■■■■■■■■■■■ ■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■ ■■■■■■ ■■■■■■■■■ ■■■ ■■■■ ■■■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■■■■ ■■■■■■■■■■ ■■■■■■■ ■■■■■■■■■■■■■ ■■■■■ ■■■■■■■■ ■■■■■■■■■ ■■■■■■ ■■■■■■ ■■■■■■■■■■ ■■■ ■■■■■■■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■ ■■■■■■ ■■■■■■■■■■■ Neither captive status nor external finishing revenue establishes unrestricted chemical-purchasing discretion.

Figure 16. Global Chemical Surface Treatment Market Size, by Buyer Operating Model, 2025 (%)

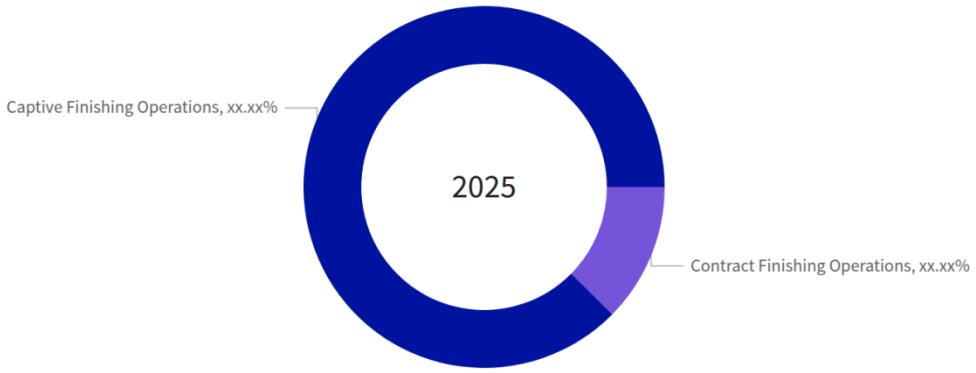

Figure 17. Global Chemical Surface Treatment Market, by Buyer Operating Model, 2032 (USD Million)

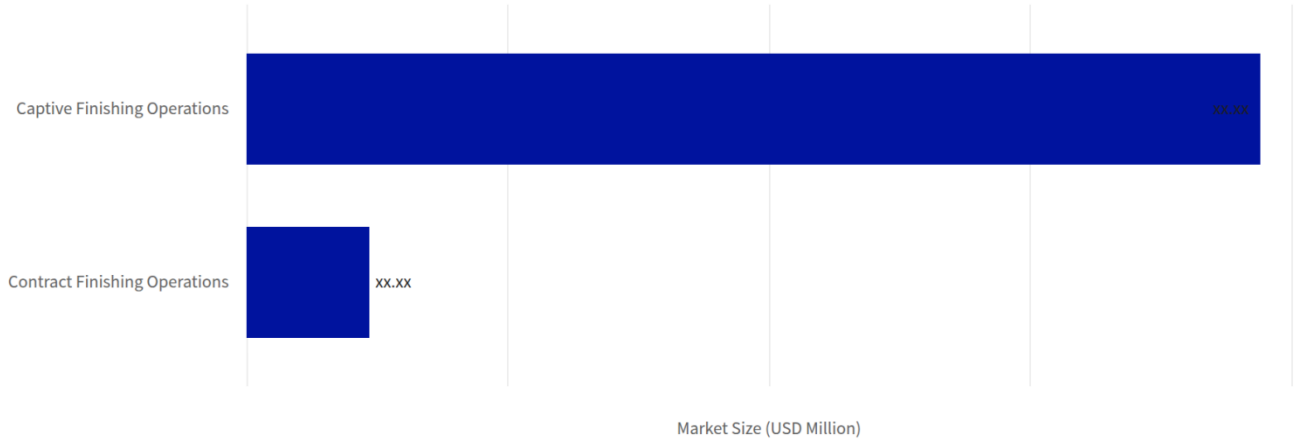

Table 123. Global Chemical Surface Treatment Market, by Buyer Operating Model growth contribution, 2025-2032

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Scope total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 124. Global Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Terms and Conditions: Q020 - D1-4426 Approved Process Source

   · Processor approval does not remove the seller's purchase-contract responsibility. This supports separating finishing procurement from downstream accountability. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

2. XMAPP Approved Applicators Request

   · MacDermid Enthone offers discovery of approved supply-chain applicators delivering treated parts to OEMs. The listing concerns a finishing relationship rather than independent permission under another customer's contract. ([industrial.macdermidenthone.cn](https://industrial.macdermidenthone.cn/quality-performance-systems/xmapp/xmapp-approved-applicators-request))

3. Metal Finishing Effluent Guidelines

   · EPA distinguishes certain job-shop electroplaters governed by the related electroplating category from other metal-finishing facilities. Its regulatory categories do not independently define the report's commercial operating-model allocation. ([epa.gov](https://www.epa.gov/eg/metal-finishing-effluent-guidelines))

4. Participate in Nadcap

   · PRI recognizes captive suppliers processing internally manufactured products and noncaptive suppliers processing as a service to others. Subscribing OEM members establish Nadcap program requirements. ([p-r-i.org](https://www.p-r-i.org/nadcap/participate/))

5. Preliminary Review of the Metal Finishing Category - April 2018

   · Taxonomy evidence: EPA's April 2018 review distinguishes captive facilities from job shops and separately reports the industries served. Its regulatory material-ownership definitions are not adopted as this report's Global allocation rule. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

6. North American Industry Classification System - United States, 2022

   · Taxonomy evidence: The manual distinguishes finishing performed for the trade from establishments that fabricate and finish products, which are classified according to the manufactured product. This supports separating contract finishing from integrated manufacturing.
   ([census.gov](https://www.census.gov/naics/reference_files_tools/2022_NAICS_Manual.pdf))

7. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion.
   ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

8. Element Solutions Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total.
   ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

   · Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge.
   ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

   · Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue.
   ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

9. Henkel Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded.
   ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

10. BASF Report 2025

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total.
    ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

11. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products.
    ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

    · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption.
    ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

12. Nihon Parkerizing Integrated Report 2025

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction.
    ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

13. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

14. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

15. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

16. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

17. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

18. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

19. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

20. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

21. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

22. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

23. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

11.1. Captive Finishing Operations

Table 125. Global Chemical Surface Treatment Market Size, by Captive Finishing Operations, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 126. Global Chemical Surface Treatment Market Size, by Captive Finishing Operations, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 127. Global Chemical Surface Treatment Market Size, by Captive Finishing Operations, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Preliminary Review of the Metal Finishing Category - April 2018
   - Taxonomy evidence: The review identifies captive metal-finishing facilities as a distinct operating setting. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
2. North American Industry Classification System - United States, 2022
   - Taxonomy evidence: The manufactured-product classification provides an independent basis for identifying integrated production rather than treating every component supplier as a contract finisher. ([census.gov](https://www.census.gov/naics/reference_files_tools/2022_NAICS_Manual.pdf))

3. MKS Inc. Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
4. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
5. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
6. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

7. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
8. Nihon Parkerizing Integrated Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))
9. Nippon Paint Holdings - Our Business Areas
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))
10. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
11. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))
12. Freudenberg Chemical Specialities - Business Portfolio and Numbers
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))
13. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))
14. Internal Revenue Service - Yearly Average Currency Exchange Rates
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

15. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

16. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

17. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

18. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

19. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
20. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

21. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
22. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
23. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

24. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
25. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
26. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
27. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
28. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
29. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

11.2. Contract Finishing Operations

Table 128. Global Chemical Surface Treatment Market Size, by Contract Finishing Operations, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 129. Global Chemical Surface Treatment Market Size, by Contract Finishing Operations, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 130. Global Chemical Surface Treatment Market Size, by Contract Finishing Operations, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Preliminary Review of the Metal Finishing Category - April 2018

   · Taxonomy evidence: The review identifies job shops separately from captive operations, establishing the external-customer finishing setting. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

2. North American Industry Classification System - United States, 2022

   · Taxonomy evidence: Industry xx.xx recognizes finishing metals and additional materials for the trade, supporting the external-customer operating setting. ([census.gov](https://www.census.gov/naics/reference_files_tools/2022_NAICS_Manual.pdf))

3. MKS Inc. Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
4. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
5. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
6. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

7. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
8. Nihon Parkerizing Integrated Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))
9. Nippon Paint Holdings - Our Business Areas
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))
10. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
11. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))
12. Freudenberg Chemical Specialities - Business Portfolio and Numbers
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))
13. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))
14. Internal Revenue Service - Yearly Average Currency Exchange Rates
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

15. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

16. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

17. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

18. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

19. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
20. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

21. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
22. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
23. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

24. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
25. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
26. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
27. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
28. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
29. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

30. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

12. Chemical Surface Treatment Market, by Supply Form

Supply Form changes the commercial product being ordered without necessarily changing its broad function. Liquids and Dry Solids both occur within established treatment categories: Zaclon advertises solution and solid galvanizing fluxes, and SurTec distinguishes powder SurTec xx.xx IT Hardwall from liquid SurTec xx.xx Hardwall sealing products. ■■■■■ ■■■ ■■■■■ ■■■■■■■■■■■■ ■■■■■■ ■ ■■■■■■■■■■ ■■■■■■■ ■■■ ■■■■■ ■■ ■■■■■■■■■■■■■■■■■■■■ ■■■■■■ ■■■■■■ ■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■■■■ ■■■■■■ ■■■■■■■■■■■ ■■■ ■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■ ■ ■■■■■■■■■ ■■■■■

Form can also be an explicit purchasing attribute. MIL-DTL-81706B with Amendment xx.xx dated 2006, distinguishes concentrated and premixed liquids, thixotropic liquids, and powder conversion materials. ■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■ ■■■■■■ ■■■■■■■■■ ■■■■■■ ■■■ ■■■■■■■■■ ■ ■■■■■■■ ■■ ■■■■■■■■■■■ ■■■■■■ ■■■■■■ ■■■ ■■■■■■■■■■■■■ ■■ ■■■■■■■■■■■■■ ■■ ■ ■■■■ ■■■■■■■■■ ■■■■■■■■ ■■■■■■■ ■■■■■ ■■■■■■■■■■■■ ■■■■ ■■■ ■■■■■■■■ ■■■■■■■■ ■■■ ■■■■ ■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■ ■■■■■■■■■■■■ ■■■■■■■ ■■■■ ■■■■■■■■ ■■ ■ ■■■■■■■ ■■■■■■■■■■■■■■■■ ■■■■■■

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Figure 18. Global Chemical Surface Treatment Market Size, by Supply Form, 2025 (%)

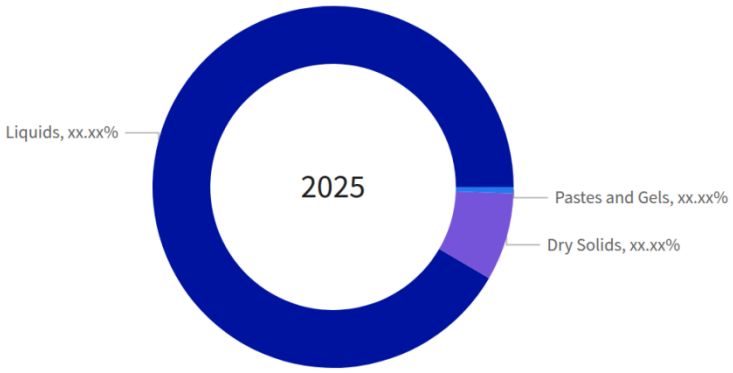

Figure 19. Global Chemical Surface Treatment Market, by Supply Form, 2032 (USD Million)

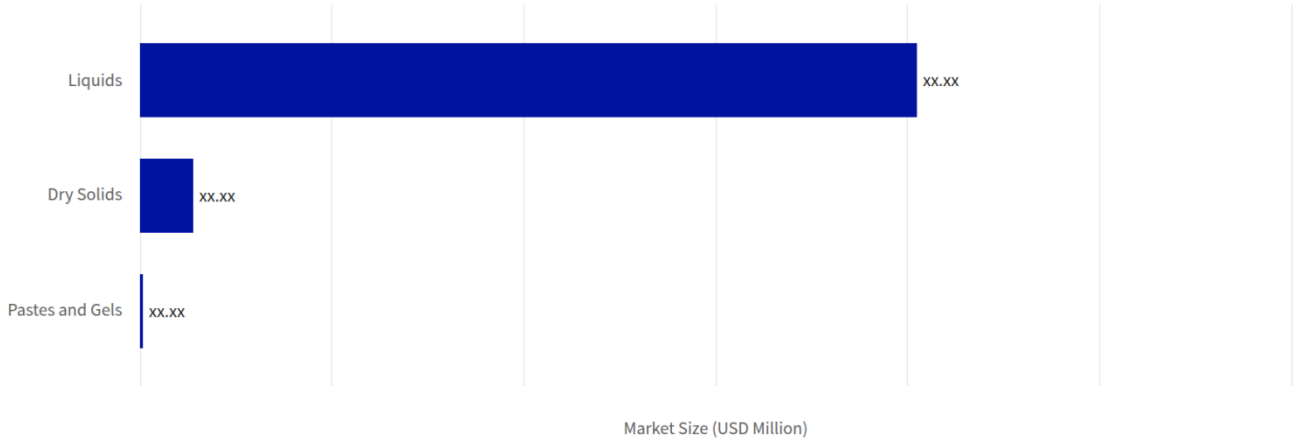

Table 131. Global Chemical Surface Treatment Market, by Supply Form growth contribution, 2025-2032

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Scope total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 132. Global Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Zinc Ammonium Chloride Fluxes

· Zaclon states that its galvanizing fluxes are available in solution and solid forms. The page does not establish buyer-specific interchangeability. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))

2. Value-added Anodizing Portfolio

· SurTec identifies SurTec xx.xx IT Hardwall as a powder cold seal and SurTec xx.xx Hardwall as a liquid product. These are distinct named offerings within a functional family. ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage. ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage. ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions. ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions. ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

3. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· The specification separately identifies concentrated and premixed liquids, thixotropic liquids, and powder material forms. It supports form-specific purchasing distinctions, not automatic gel classification or substitution. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Taxonomy evidence: Section xx.xx.xx.xx distinguishes liquid and powder forms, including a thixotropic liquid; thixotropy alone therefore does not establish gel classification. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

4. Post weld cleaning using pickling pastes

   · HSE identifies proprietary pickling pastes used by stainless-steel fabricators and warns of serious hazards for the products covered by its guidance. This supports neither a universal paste hazard ranking nor an assumption of reduced compliance burden.
   ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight.
   ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight.
   ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

5. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

   · Taxonomy evidence: Section xx.xx.xx.xx distinguishes delivered liquid and solid chemical inputs.
   ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))

6. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion.
   ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

7. Element Solutions Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total.
   ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

   · Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge.
   ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

   · Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue.
   ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

8. Henkel Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded.
   ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

9. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total.
   ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

10. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

· Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

11. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

12. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

13. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

14. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

15. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

16. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

17. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

18. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The large qualifying semiconductor cohort supplies a common monetary weight for the liquid-form model, not an observed form percentage. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The large qualifying semiconductor cohort supplies a common monetary weight for the liquid-form model, not an observed form percentage. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

19. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

20. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

21. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

12.1. Liquids

Table 133. Global Chemical Surface Treatment Market Size, by Liquids, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 134. Global Chemical Surface Treatment Market Size, by Liquids, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 135. Global Chemical Surface Treatment Market Size, by Liquids, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys, May 2, 2006
   · Taxonomy evidence: The supplied-form classification independently recognizes concentrated and premixed liquid conversion materials. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))
2. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006
   · Taxonomy evidence: Section xx.xx.xx.xx identifies liquid deliveries and proprietary treatment solutions. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))
3. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

4. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
5. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
6. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
7. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

8. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

9. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

10. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

11. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

12. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

13. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

14. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

15. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The large qualifying semiconductor cohort supplies a common monetary weight for the liquid-form model, not an observed form percentage. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The large qualifying semiconductor cohort supplies a common monetary weight for the liquid-form model, not an observed form percentage. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

16. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

17. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

18. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

19. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
20. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

21. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
22. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
23. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

24. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
25. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
26. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
27. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
28. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
29. SurTec - Value-added Anodizing Portfolio
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage. ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage. ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

30. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))

12.2. Dry Solids

Table 136. Global Chemical Surface Treatment Market Size, by Dry Solids, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 137. Global Chemical Surface Treatment Market Size, by Dry Solids, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 138. Global Chemical Surface Treatment Market Size, by Dry Solids, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys, May 2, 2006
   · Taxonomy evidence: The supplied-form classification independently recognizes powder conversion materials. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))
2. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006
   · Taxonomy evidence: Section xx.xx.xx.xx identifies powders, pellets, and flakes as supplied solid forms. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))
3. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

4. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
5. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
6. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
7. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

8. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

9. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

10. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

11. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

12. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

13. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

14. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

15. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

16. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

17. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

18. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

19. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
20. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

21. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
22. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
23. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

24. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
25. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
26. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
27. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
28. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
29. SurTec - Value-added Anodizing Portfolio
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
      ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
      ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

30. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))

12.3. Pastes and Gels

Table 139. Global Chemical Surface Treatment Market Size, by Pastes and Gels, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 140. Global Chemical Surface Treatment Market Size, by Pastes and Gels, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 141. Global Chemical Surface Treatment Market Size, by Pastes and Gels, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Post weld cleaning using pickling pastes - Health and Safety Executive
   - Taxonomy evidence: HSE identifies proprietary pickling pastes supplied as prepared commercial products, independently establishing paste-form treatment goods rather than merely an application-service category. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm?utm_source=openai))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
2. MKS Inc. Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
4. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
5. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
6. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

7. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

8. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

9. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

10. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

11. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

12. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

13. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

14. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

15. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

16. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

17. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

18. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
19. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

20. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
21. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
22. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

23. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
24. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
25. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
26. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
27. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.

13. Chemical Surface Treatment Market, by Sales Channel

Direct Sales and Distributor and Reseller Sales differ principally in who owns the commercial sale, not in the ordering interface or delivery vehicle. ■■■ ■■■■ ■■■■■■ ■■■■■■ ■■■■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■ ■■■■■■ ■■■ ■■■■■■■■■■■■■■ ■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■ ■ ■■■■■■■■■■■■ ■■■ ■■■■■■■ ■■■■■ ■■■■ ■■ ■ ■■■■■■■■■■■ ■■■■■■ ■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■■■■■ ■■■■■■ ■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■ ■■ ■■■■■■■■■■■■■■ ■■■■■■■■■■■■■■■■ An online order or direct shipment is not sufficient evidence of a direct manufacturer relationship.

Manufacturer selection and logistical coordination can also remain separate. The European Commission's historical BASF/Chemetall assessment documented automotive customers selecting surface-treatment products and negotiating with their manufacturers even where a system supplier coordinated delivery. ■■■■ ■■■■■■■■■■■■ ■ ■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■ ■ ■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■ ■ ■■■■■ ■■■ ■■■■■■■ ■■■ ■■■■■■■■■■■■ ■■■■■■■■■ ■■■■■ ■■■■■ ■■■■■■■ ■■■■■ ■■■ ■■■■■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■■ ■■■■■ ■■■■■■■ ■■■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■■■■■ ■■■■■■■■■

Henkel's distributor locator includes Industrial Surface Treatments, establishing an intermediary discovery route without establishing individual inventory, exclusivity or service commitments. A new entrant should select a reseller when the counterparty demonstrably assumes the local selling and documentation responsibilities the account needs. ■■■■■■■ ■■■■■■■ ■■ ■■■■■■■■■■ ■■■■ ■■■ ■■■■■■■■■■■■ ■■■ ■■■■ ■■■■■ ■■■■■■■■■■■■ ■■■■■■■ ■■■ ■■■ ■■■■■ ■■■■■■■ ■ ■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■■ ■■■ ■■■■■■■■■ ■■ ■■■■■■■■ ■■■■■■■ ■■■■■■■■■■■■■ ■■ ■■■■■■■■■■■■ ■■■ ■■■■■■■ ■■■■■■■■ ■■■ ■■ ■■■■■■■■■■ ■■■■■ ■■■■ ■■■ ■■■■■■■■■■■■■ ■■■■■■■ ■■■■■■■■ ■■■■■■■■■■ ■■ ■■■■■■■■ ■■■ ■■■■■■■■ ■■ ■■■ ■■■■■■■ ■■■■■■■■■■■■

Figure 20. Global Chemical Surface Treatment Market Size, by Sales Channel, 2025 (%)

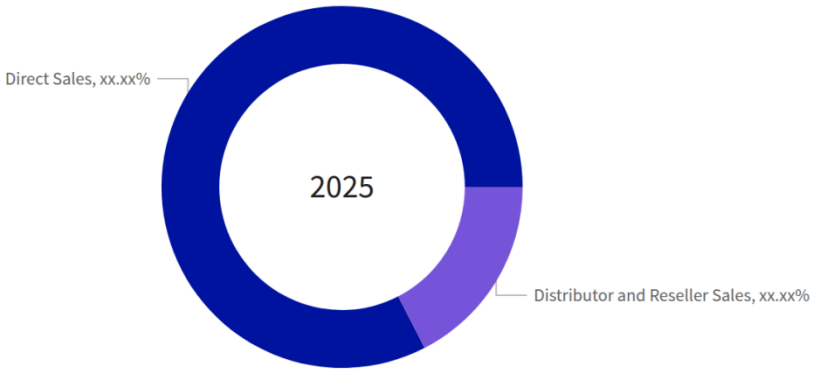

Figure 21. Global Chemical Surface Treatment Market, by Sales Channel, 2032 (USD Million)

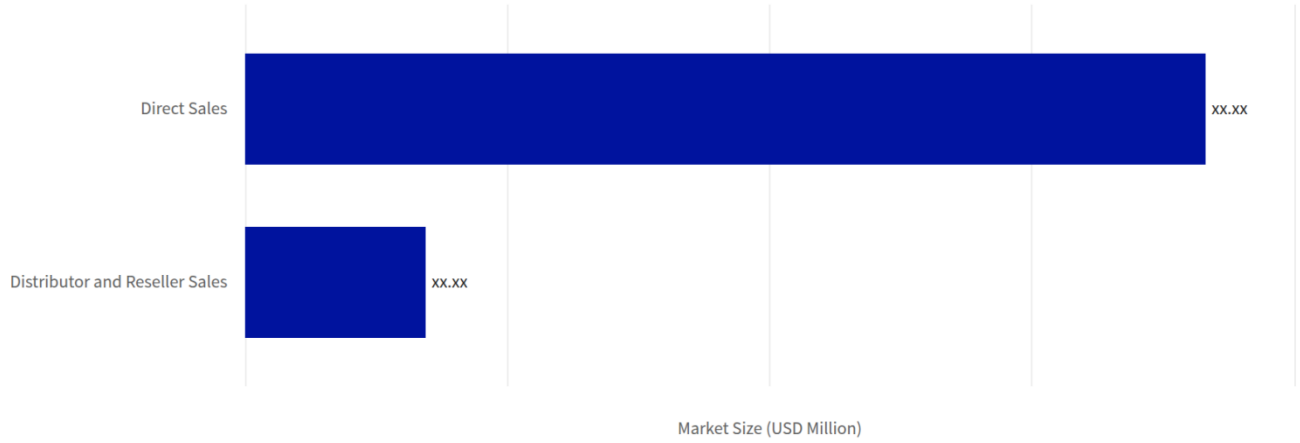

Table 142. Global Chemical Surface Treatment Market, by Sales Channel growth contribution, 2025-2032

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Scope total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 143. Global Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Find a distributor

· Henkel provides distributor discovery expressly including Industrial Surface Treatments; the page does not state individual inventory or service obligations. ([next.henkel-adhesives.com](https://next.henkel-adhesives.com/us/en/support/find-a-distributor.html))

2. Monthly Wholesale Trade - Definitions

· Census distinguishes title-taking distributors, agents, manufacturers' selling offices and manufacturer delivery of a wholesaler's sale. ([census.gov](https://www.census.gov/wholesale/definitions.html))

· Taxonomy evidence: Census distinguishes distributors taking title, manufacturers' selling offices, and agents acting for others; it separately defines electronic ordering and drop shipment. These distinctions support classification by economic seller rather than interface or delivery. ([census.gov](https://www.census.gov/wholesale/definitions.html))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))

3. European Commission - Case M.8136, BASF / Chemetall

· The merger decision distinguishes automotive customer product selection and manufacturer negotiation from system-supplier logistical coordination and records separate procurement of coatings and treatment products. ([ec.europa.eu](https://ec.europa.eu/competition/mergers/cases/decisions/m8136_184_3.pdf))

· Taxonomy evidence: Paragraphs xx.xx-xx.xx distinguish logistical system-supplier coordination from end-customer selection and price negotiation with the surface-treatment manufacturer. Customers generally procured coatings and surface-treatment products separately. ([ec.europa.eu](https://ec.europa.eu/competition/mergers/cases/decisions/m8136_184_3.pdf))

4. MKS Inc. Annual Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

5. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
6. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
7. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
8. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

9. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

10. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

11. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The sales diagram identifies manufacturer-group routes to article manufacturers and specialist plating companies; these are not disclosed channel percentages. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The sales diagram identifies manufacturer-group routes to article manufacturers and specialist plating companies; these are not disclosed channel percentages. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

12. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

13. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

14. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

15. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

16. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

17. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

18. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

19. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

20. Health and Safety Executive - Post weld cleaning using pickling pastes

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

21. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))

13.1. Direct Sales

Table 144. Global Chemical Surface Treatment Market Size, by Direct Sales, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 145. Global Chemical Surface Treatment Market Size, by Direct Sales, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 146. Global Chemical Surface Treatment Market Size, by Direct Sales, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Monthly Wholesale Trade - Definitions, U.S. Census Bureau
   - Taxonomy evidence: Manufacturers' sales branches and offices market their manufacturing enterprise's products. Grouping these controlled offices with direct sales is the report's explicit analytical convention. ([census.gov](https://www.census.gov/wholesale/definitions.html))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
2. European Commission - Case M.8136, BASF / Chemetall, merger decision
   - Taxonomy evidence: The decision documents end customers negotiating surface-treatment product prices with manufacturers, supporting direct manufacturer-facing procurement as a recognized sector relationship. ([ec.europa.eu](https://ec.europa.eu/competition/mergers/cases/decisions/m8136_184_3.pdf))
3. MKS Inc. Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

4. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
5. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
6. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

7. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

· Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

8. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

9. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

10. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The sales diagram identifies manufacturer-group routes to article manufacturers and specialist plating companies; these are not disclosed channel percentages. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The sales diagram identifies manufacturer-group routes to article manufacturers and specialist plating companies; these are not disclosed channel percentages. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

11. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

12. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

13. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))
14. Internal Revenue Service - Yearly Average Currency Exchange Rates
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))
15. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25
    - Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
16. SEMI Materials Market Data Subscription - Coverage and Methodology
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))
17. Entegris, Inc. Form 10-K for the year ended December 31, 2025
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))
18. BASF Completes Acquisition of Chemetall - December 15, 2016
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

19. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
20. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

21. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
22. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
23. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

24. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
25. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
26. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
27. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
28. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
29. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))

13.2. Distributor and Reseller Sales

Table 147. Global Chemical Surface Treatment Market Size, by Distributor and Reseller Sales, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 148. Global Chemical Surface Treatment Market Size, by Distributor and Reseller Sales, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 149. Global Chemical Surface Treatment Market Size, by Distributor and Reseller Sales, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Post weld cleaning using pickling pastes - Health and Safety Executive

   · Taxonomy evidence: HSE describes pickling pastes as available mainly from welding-consumable and stainless-steel suppliers. This supports a sector-specific reseller route, not a Global channel share. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm?utm_source=openai))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

2. Monthly Wholesale Trade - Definitions, U.S. Census Bureau

   · Taxonomy evidence: A distributor buys and owns products before resale; a wholesaler can make the sale even when the manufacturer delivers directly. ([census.gov](https://www.census.gov/wholesale/definitions.html))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))

3. MKS Inc. Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
4. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
5. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
6. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

7. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
8. Nihon Parkerizing Integrated Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))
9. Nippon Paint Holdings - Our Business Areas
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))
10. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
11. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))
12. Freudenberg Chemical Specialities - Business Portfolio and Numbers
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))
13. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))
14. Internal Revenue Service - Yearly Average Currency Exchange Rates
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

15. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

16. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

17. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

18. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

19. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
20. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

21. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
22. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
23. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

24. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
25. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
26. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
27. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
28. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
29. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))

14. Chemical Surface Treatment Market, by Substrate Material

[redacted] Ferrous Metals and Nonferrous Metals therefore support both material-specific and mixed-material sourcing propositions. A captive buyer should consolidate only where the accepted offerings cover the actual material requirements; a broad metal portfolio does not establish universal interchangeability.

Polymers and Polymer Composites require a separate application-level comparison. Atotech markets Adhemax for named plastics including ABS, PP and ABS/PC blends. [redacted]

[redacted] This supports a bonding-system selection context, not equivalence across all glass and ceramic applications. Procurement should establish the accepted treatment and bonding relationship without extending the chemical purchase to the full value of adhesives, sealants or finished glazing.

Semiconductor Materials require application-specific sourcing. [redacted] Buyers should verify the named material's acceptance and supply arrangement rather than import a general industrial-finishing approval.

Figure 22. Global Chemical Surface Treatment Market Size, by Substrate Material, 2025 (%)

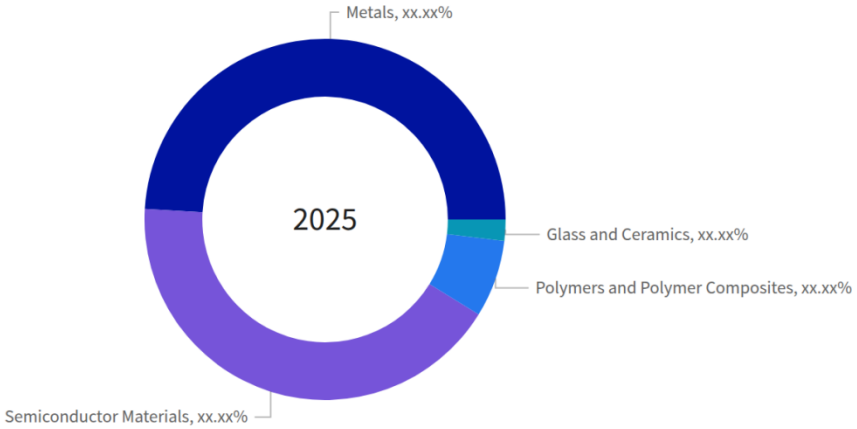

Figure 23. Global Chemical Surface Treatment Market, by Substrate Material, 2032 (USD Million)

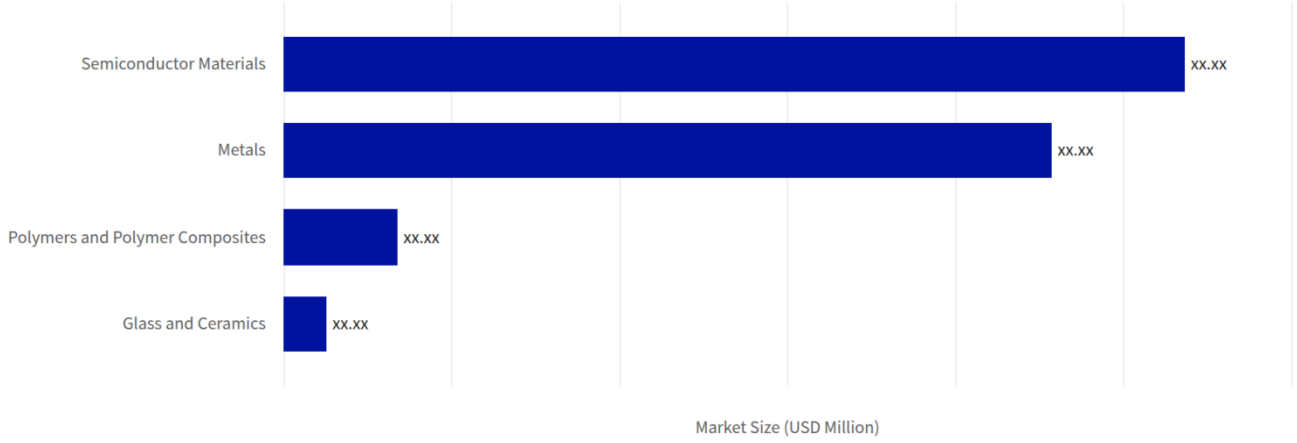

Table 150. Global Chemical Surface Treatment Market, by Substrate Material growth contribution, 2025-2032

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Scope total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 151. Global Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Industry

   · Chemetall advertises stainless-steel pickling, activating and passivating agents for steel, zinc and aluminum, and Oxsilan multi-metal pretreatment. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

2. Fujifilm Launches Advanced Packaging CMP Slurry

   · The September xx.xx 2025 announcement reports adoption of the advanced-packaging CMP slurry by an unnamed semiconductor device manufacturer. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

3. Adhemax - Excellence in plating on plastics

   · Atotech advertises Adhemax for named plastics including ABS, PP and ABS/PC blends, establishing bounded material coverage. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/plating-on-plastics/adhemax/))

4. European Commission - Case M.7498, Compagnie de Saint-Gobain / Sika

   · The 2015 decision recognizes cleaners, surface activators and primers as distinct automotive-glass surface-treatment groups. ([ec.europa.eu](https://ec.europa.eu/competition/mergers/cases/decisions/m7498_20150722_20310_4457021_EN.pdf))

   · Taxonomy evidence: The decision's automotive-glass product distinctions establish an independent commercial nonmetal treatment context. Applying that context to the receiving-material axis is an analytical mapping; it does not admit all primers, adhesives, or nonmetal treatment portfolios. ([ec.europa.eu](https://ec.europa.eu/competition/mergers/cases/decisions/m7498_20150722_20310_4457021_EN.pdf))

5. Sika Aktivator-205 - Product Data Sheet

   · Sika identifies Aktivator-xx.xx as an adhesion promoter for ceramic screen prints and other named surfaces, associated with Sikaflex and Sikasil products. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

6. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

· Taxonomy evidence: The document distinguishes metal, plastic, and circuit-board receiving materials. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))

7. MKS Inc. Annual Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

8. Element Solutions Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

9. Henkel Annual Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

10. BASF Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

11. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

· Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

12. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

13. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

14. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

15. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

16. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

17. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

18. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

19. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association's own category series supports the inherited semiconductor component and demand-cycle comparison, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association's own category series supports the inherited semiconductor component and demand-cycle comparison, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

20. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

21. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

22. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

14.1. Metals

Table 152. Global Chemical Surface Treatment Market, by Metals growth contribution, 2025-2032

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Scope total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 153. Global Chemical Surface Treatment Market Size, by Metals, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 154. Global Chemical Surface Treatment Market Size, by Metals, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 155. Global Chemical Surface Treatment Market Size, by Metals, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

   · Taxonomy evidence: The reference explicitly covers treatment of metal workpieces. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))

2. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
4. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
5. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
6. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

7. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

8. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

9. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

10. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

11. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

12. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

13. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

14. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

15. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

16. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

17. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

18. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
19. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

20. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
21. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
22. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

23. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
24. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
25. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
26. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
27. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.

14.1.1. Ferrous Metals

Table 156. Global Chemical Surface Treatment Market Size, by Ferrous Metals, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 157. Global Chemical Surface Treatment Market Size, by Ferrous Metals, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 158. Global Chemical Surface Treatment Market Size, by Ferrous Metals, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

   · Taxonomy evidence: Its substrate descriptions include steel. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))

2. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
4. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
5. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
6. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

7. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

8. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

9. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

10. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

11. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

12. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

13. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

14. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

15. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

16. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

17. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

18. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
19. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

20. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
21. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
22. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

23. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
24. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
25. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
26. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
27. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.

14.1.2. Nonferrous Metals

Table 159. Global Chemical Surface Treatment Market Size, by Nonferrous Metals, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 160. Global Chemical Surface Treatment Market Size, by Nonferrous Metals, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 161. Global Chemical Surface Treatment Market Size, by Nonferrous Metals, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

   · Taxonomy evidence: Its substrate descriptions include copper, brass, aluminum, zinc alloys, and magnesium. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))

2. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
4. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
5. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
6. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

7. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

8. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

9. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

10. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

11. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

12. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

13. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

14. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

15. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

16. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

17. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

18. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
19. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

20. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
21. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
22. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

23. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
24. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
25. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
26. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
27. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.

14.2. Semiconductor Materials

Table 162. Global Chemical Surface Treatment Market Size, by Semiconductor Materials, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 163. Global Chemical Surface Treatment Market Size, by Semiconductor Materials, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 164. Global Chemical Surface Treatment Market Size, by Semiconductor Materials, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Electrical and Electronic Components Effluent Guidelines - U.S. EPA

   · Taxonomy evidence: EPA separately recognizes semiconductor manufacturing within the Electrical and Electronic Components category and identifies cleaning, degreasing, and etching among associated activities. This establishes category context, not eligible treatment-chemical product sales or the report's bare-semiconductor inclusion boundary. ([epa.gov](https://www.epa.gov/eg/electrical-and-electronic-components-effluent-guidelines))

2. SEMI C1 - Guide for the Analysis of Liquid Chemicals

   · Taxonomy evidence: The standards abstract recognizes liquid chemicals used in semiconductor-device production and chemical-specific purity grades. This supplies contextual commercial support only: it does not establish which products treat bare semiconductor surfaces or fall within this market's functional boundary. ([store-us.semi.org](https://store-us.semi.org/products/c00100-semi-c1-guide-for-the-analysis-of-liquid-chemicals))

3. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

4. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
5. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
6. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
7. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

8. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

9. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

10. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

11. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

12. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

13. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

14. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

15. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association's own category series supports the inherited semiconductor component and demand-cycle comparison, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association's own category series supports the inherited semiconductor component and demand-cycle comparison, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

16. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

17. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

18. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

19. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
20. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

21. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
22. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
23. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

24. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
25. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
26. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
27. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
28. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
29. Fujifilm Launches Advanced Packaging CMP Slurry
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

14.3. Polymers and Polymer Composites

Table 165. Global Chemical Surface Treatment Market Size, by Polymers and Polymer Composites, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 166. Global Chemical Surface Treatment Market Size, by Polymers and Polymer Composites, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 167. Global Chemical Surface Treatment Market Size, by Polymers and Polymer Composites, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

   · Taxonomy evidence: Chapter xx.xx includes plastics and glass-fiber circuit-board substrates. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf?utm_source=openai))

2. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
4. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
5. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
6. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

7. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

8. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

9. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

10. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

11. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

12. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

13. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

14. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

15. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

16. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

17. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

18. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
19. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

20. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
21. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
22. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

23. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
24. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
25. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
26. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
27. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.

14.4. Glass and Ceramics

Table 168. Global Chemical Surface Treatment Market Size, by Glass and Ceramics, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 169. Global Chemical Surface Treatment Market Size, by Glass and Ceramics, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 170. Global Chemical Surface Treatment Market Size, by Glass and Ceramics, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. European Commission Decision M.7498 - Compagnie de Saint-Gobain/Sika, July 22, 2015

   · Taxonomy evidence: Paragraphs xx.xx-xx.xx independently recognize glass cleaners, surface activators, and primers as automotive-glass surface-treatment product groups. This supports the glass portion of the retained combined category, not ceramic coverage or 2025 Global sales. ([ec.europa.eu](https://ec.europa.eu/competition/mergers/cases/decisions/m7498_20150722_20310_4457021_EN.pdf))

2. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
4. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
5. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
6. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

7. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

8. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

9. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

10. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

11. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

12. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

13. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

14. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

15. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

16. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

17. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

18. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
19. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

20. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
21. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
22. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

23. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
24. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
25. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
26. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
27. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
28. Sika Aktivator-205 - Product Data Sheet
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

15. Chemical Surface Treatment Market, by Chromium Chemistry

Chromium Chemistry creates different purchasing questions rather than a single chromium-versus-no-chromium choice. ■■■■■■■ ■■■■■■■■■■ ■■■■■ ■■ ■■■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■■■■■■■■■■■■■■■■■■■ ■■ ■■■■■■■■■ ■■■■■■■■■■■ ■■■ ■■■■■■■■■■■■■■■■■■■■ ■■■■■■ ■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■■ ■■■ ■■■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■ Procurement declarations must distinguish exclusion of hexavalent chromium from exclusion of chromium generally before suppliers are compared.

■■■■■■■■■■ ■■■■■■■■■■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■ ■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■■■ ■■■■■■■■■■ ■ ■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■■■ ■■■ ■■■■■■■■■■■■■■■■■■ ■■■■■■■■■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■ ■■■ ■■ ■■■■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■ ■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■■■ Neither that example nor a supplier's alternative-product claim establishes permission for the buyer's actual supply route. A composition category is therefore not a substitute for the applicable legal record or customer acceptance.

■■■■■■■ ■■■■■■■■■■ ■ ■■■■■■■ ■■■■■■■ ■■■■■ ■■■■■■■■■■ ■■■■■ ■■■■■■■■■■■■ ■■■ ■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■■ ■■■■■ ■■■■■■■ ■■■ ■■■■■■■■■ ■■■■■■■■■■■ ■■■■■■■■■■■■■■ ■■■■■■■■■■ ■■■ ■■■ ■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■■■ ■ ■■■■■■■■■■ ■■■■■■■■■■■■ ■■■ ■■■■■■■■ ■ ■■■■■■■■■■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■ ■ ■■■■■■■■■■■■■■ ■■■■■■■■■■■■■ Retaining an incumbent is defensible where its applicable permission and acceptance remain established and the replacement's do not; changing suppliers becomes defensible when those conditions and accountable delivery commitments align. Product listings establish candidates, not local availability or application-wide equivalence.

Figure 24. Global Chemical Surface Treatment Market Size, by Chromium Chemistry, 2025 (%)

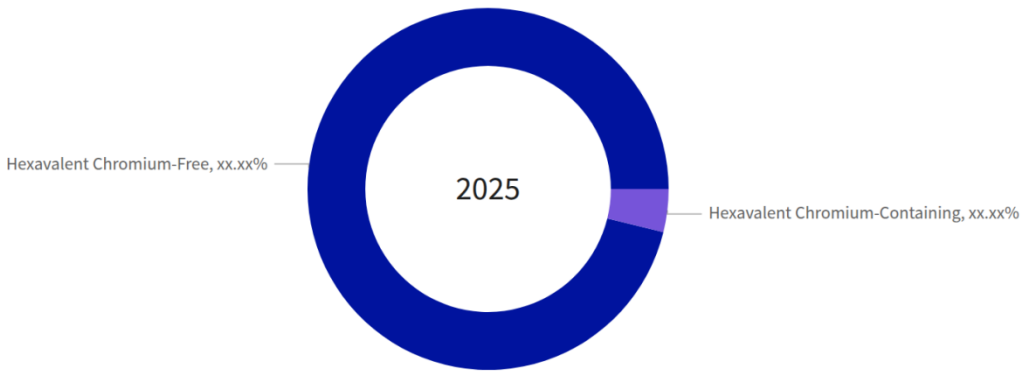

Figure 25. Global Chemical Surface Treatment Market, by Chromium Chemistry, 2032 (USD Million)

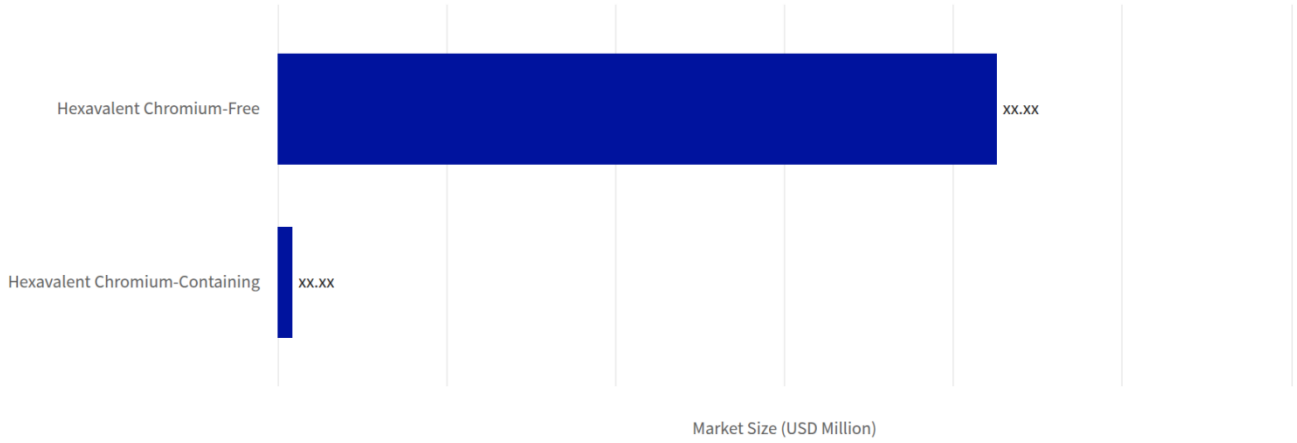

Table 171. Global Chemical Surface Treatment Market, by Chromium Chemistry growth contribution, 2025-2032

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Scope total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 172. Global Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Find a distributor

   · The official catalog navigation separately identifies chrome-free conversion coatings; this is category advertising, not product-specific availability. ([next.henkel-adhesives.com](https://next.henkel-adhesives.com/us/en/support/find-a-distributor.html))

2. Authorisation

   · REACH authorization for listed substances concerns specified uses and Commission decisions. ([single-market-economy.ec.europa.eu](https://single-market-economy.ec.europa.eu/sectors/chemicals/reach/authorisation_en))

3. REACH and Aviation
   - EASA identifies a historical aviation authorization for chromium-trioxide surface treatment to prevent corrosion, not permission for every present use. ([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission. ([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption. ([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
4. BluCr - Trivalent hard chrome technology
   - Atotech describes BluCr as trivalent chromium and hexavalent-chromium-free, supporting its distinction from Chromium-Free. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
5. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys, May 2, 2006
   - Taxonomy evidence: Section xx.xx.xx.xx distinguishes hexavalent-chromium-containing and no-hexavalent-chromium conversion materials. This is a specific procurement classification, not a universal trace-content or compliance rule. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))
6. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006
   - Taxonomy evidence: The contents distinguish hexavalent, trivalent, and chromium-free conversion treatments. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))
7. MKS Inc. Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

8. Element Solutions Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

   · Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

   · Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

9. Henkel Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

10. BASF Report 2025

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

11. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

    · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

12. Nihon Parkerizing Integrated Report 2025

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

    · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

13. Nippon Paint Holdings - Our Business Areas

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

14. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026
· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
15. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026
· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))
16. Freudenberg Chemical Specialities - Business Portfolio and Numbers
· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))
17. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals
· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))
18. Internal Revenue Service - Yearly Average Currency Exchange Rates
· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

19. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

20. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

21. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

22. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

15.1. Hexavalent Chromium-Free

Table 173. Global Chemical Surface Treatment Market, by Hexavalent Chromium-Free growth contribution, 2025-2032

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Scope total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 174. Global Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 175. Global Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 176. Global Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys, May 2, 2006

   · Taxonomy evidence: Type II is defined by absence of hexavalent chromium; that wording does not establish absence of every chromium constituent. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

2. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

   · Taxonomy evidence: Section xx.xx.xx.xx distinguishes trivalent treatments without hexavalent chromium. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))

3. MKS Inc. Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
4. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
5. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
6. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

7. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
8. Nihon Parkerizing Integrated Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))
9. Nippon Paint Holdings - Our Business Areas
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))
10. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
11. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))
12. Freudenberg Chemical Specialities - Business Portfolio and Numbers
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))
13. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))
14. Internal Revenue Service - Yearly Average Currency Exchange Rates
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

15. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

16. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

17. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

18. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

19. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
20. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

21. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
22. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
23. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

24. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
25. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
26. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
27. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
28. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.

29. Atotech - BluCr, Trivalent Hard Chrome Technology
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
30. EASA - REACH and Aviation
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption. ([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

15.1.1. Chromium-Free

Table 177. Global Chemical Surface Treatment Market Size, by Chromium-Free, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 178. Global Chemical Surface Treatment Market Size, by Chromium-Free, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 179. Global Chemical Surface Treatment Market Size, by Chromium-Free, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

   · Taxonomy evidence: Section xx.xx.xx.xx separately identifies chromium-free conversion treatments. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))

2. MKS Inc. Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
4. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
5. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

6. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
7. Nihon Parkerizing Integrated Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))
8. Nippon Paint Holdings - Our Business Areas
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))
9. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
10. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))
11. Freudenberg Chemical Specialities - Business Portfolio and Numbers
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))
12. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))
13. Internal Revenue Service - Yearly Average Currency Exchange Rates
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

14. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

15. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

16. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

17. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

18. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
19. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

20. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
21. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
22. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

23. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
24. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
25. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
26. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
27. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
28. Atotech - BluCr, Trivalent Hard Chrome Technology
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

15.1.2. Chromium-Containing

Table 180. Global Chemical Surface Treatment Market Size, by Chromium-Containing, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 181. Global Chemical Surface Treatment Market Size, by Chromium-Containing, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 182. Global Chemical Surface Treatment Market Size, by Chromium-Containing, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

   · Taxonomy evidence: Sections xx.xx.xx.xx and xx.xx.xx.xx identify trivalent chromium treatments. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))

2. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
4. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
5. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))
6. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

7. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

8. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

9. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

10. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

11. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

12. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

13. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

14. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

15. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

16. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

17. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

18. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
19. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

20. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
21. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
22. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

23. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
24. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
25. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
26. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
27. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
28. Atotech - BluCr, Trivalent Hard Chrome Technology
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

15.2. Hexavalent Chromium-Containing

Table 183. Global Chemical Surface Treatment Market Size, by Hexavalent Chromium-Containing, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 184. Global Chemical Surface Treatment Market Size, by Hexavalent Chromium-Containing, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 185. Global Chemical Surface Treatment Market Size, by Hexavalent Chromium-Containing, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys, May 2, 2006

   · Taxonomy evidence: Type I identifies conversion-material compositions containing hexavalent chromium, independently supporting this composition branch for the specified product setting. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

2. Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

   · Taxonomy evidence: Section xx.xx.xx.xx identifies hexavalent chromium conversion treatments. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2019-xx.xx/stm_bref_0806.pdf))

3. MKS Inc. Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
4. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
5. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))
6. BASF Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

7. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

8. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

9. Nippon Paint Holdings - Our Business Areas

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

10. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

11. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

12. Freudenberg Chemical Specialities - Business Portfolio and Numbers

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

13. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

14. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

15. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

16. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

17. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

18. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

19. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
20. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

21. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
22. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
23. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

24. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
25. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
26. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
27. Chemetall - Africa locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.
28. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
29. EASA - REACH and Aviation
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
      ([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

16. Chemical Surface Treatment Market, by Region

Asia-Pacific supplier coverage differs by commercial role, not merely by the presence of a regional office. ■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■ ■■■■■ ■■■ ■■■■■ ■■■ ■ ■■■■■ ■■■■■■ ■■ ■■■■■■■■■ ■■■■■ ■■■ ■■■■■■■■■ ■■■■■■■■ ■■■■■■ ■■■ ■■■■■■■■■ ■ ■■■■■■■■■■ ■■■■■■■■ ■■■■ ■■■ ■■■■■■■■■ ■■■■ ■■■ ■■■■■■■■ ■■■■■■■■ ■■ ■■■■ ■■■■■■■■■ ■■■■■ ■ ■■■■■ ■■■■■■ ■■■■ ■■■ ■■■■■■■■■ ■■■■■ ■■■■■■■■■■ ■■■■■■ ■■■■■■■ ■■■■■■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■■■ ■■■■■ ■■■■■■■■ ■■■■■■■■■ A regional account relationship becomes useful when those responsibilities are assigned for each destination.

■■■■■ ■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■■■■■■■■■ ■■■■■■■■■■■ ■■■■ ■■■■■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■■ ■■■■■■ ■■ ■■■■■■■■ ■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■ ■■■■■■■■ ■■ ■■■■■ ■■■■■■■ ■■■■■■■■■■■■ ■■■■■ ■■■■■■ ■■■ ■■■■■■■ ■■■■■■■■ ■■■■■ ■■■ ■■■■■■■■■■■■■■■■■■■■■■ ■■■■■■■■■■■■■ A regional chemical agreement therefore cannot replace approval by the functions responsible for the receiving facility. Consolidation is defensible when documentation and delivery obligations are maintained by country; separate arrangements remain preferable when a common supplier cannot support those differences.

■■■■■ ■■■■■■■ ■■■■■■ ■■■ ■■ ■■■■■■■ ■■ ■ ■■■■■■ ■■■■■■■■■■■■■■■ ■■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■ ■■■■ ■■■■■■■■■■■ ■■■■■■■■■■■ ■ ■■■■■■■■ ■■■■■■■■■■■■■■■■■■ ■■■■ ■■■■■■■■■■■■ ■■■■■■■■■■ ■■■■ ■■■■■ ■■■■■■■■■■■ ■■ ■ ■■■■■■■■■■■■■■■■ ■■■■■■■■■■■ ■■■■ ■■■■■■■■ ■■ ■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■ ■■■■■■■■■■ ■■■■■■ ■■■■■■■■ ■■ ■■■■■■ ■■■■■■■■■■■■■■ An entrant should establish the applicable Brazilian implementing requirements and responsible commercial entity before committing to that route. A distributor's regional coverage is useful only where it includes the actual destination obligations, rather than an assumed region-wide approval.

■■■■■■ ■■■■■■■■ ■ ■■■■■■ ■■ ■■■■■■■■■■■■■ ■■■■■■■■■■ ■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■■■ ■■■■■■■■■■ ■■ ■■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■ ■■■■■ ■■■■■■■■ ■■ ■■■■■ ■■■ ■■ ■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■■■■ Suppliers should distinguish an EU-facing purchasing review from a Great Britain supply arrangement instead of treating European coverage as one permission. Consolidating commercial coordination may simplify account management, but the relevant legal entity, use coverage and customer acceptance must remain identifiable for each route.

■■■ ■■■■■■■ ■■■■ ■■■■■■■■■■■■ ■■■ ■■■■■ ■■■■■■■ ■■■ ■■■■■■■ ■■ ■■■■ ■■ ■■■■■■■■ ■■■■■■■■■■ ■■■ ■■■■■■■ ■■■■ ■■■■■■■■ ■■■■■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■ ■■■■ ■■■■■■■■■■■■■ ■■ ■■■■■■■■■■ ■■■■■■■ ■■■ ■■■■■■■■■■■■■ ■■■■■■■■■■■■■ ■■■ ■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■■ ■■■■■ ■■■■■■■■■■ ■■■■■■■■ ■■ ■■■■■■■■■■ Captive buyers should establish whether the purchasing entity and relevant inputs qualify before structuring imports around that benefit. A distributor route remains an alternative where direct-import administration would outweigh the buyer's demonstrated benefit; the UAE example does not establish equivalent treatment elsewhere in the region.

[illegible] South Africa also assigns chemical-documentation responsibilities to covered manufacturers, importers and suppliers. Buyers should identify the actual seller and accountable documentation provider; suppliers should choose local representation only where its contractual responsibilities address the destination requirement.

Figure 26. Global Chemical Surface Treatment Market, by Region: Market share evolution, 2025-2032

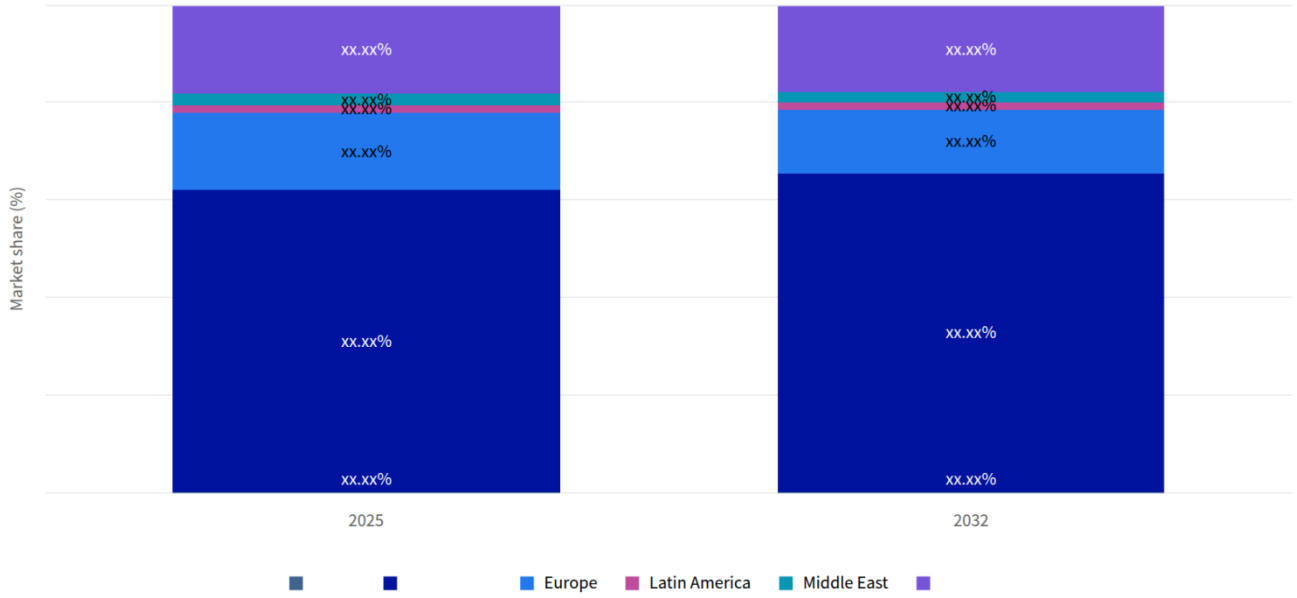

Figure 27. Global Chemical Surface Treatment Market, by Region: Market size by category, 2025

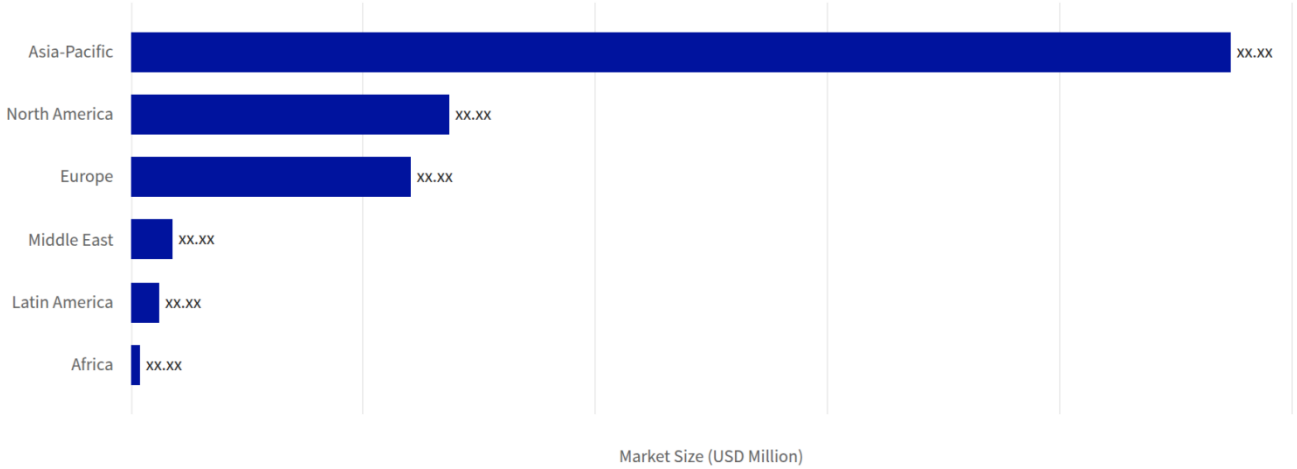

Figure 28. Global Chemical Surface Treatment Market, Regional growth by Chromium Chemistry, 2025-2032 (CAGR %)

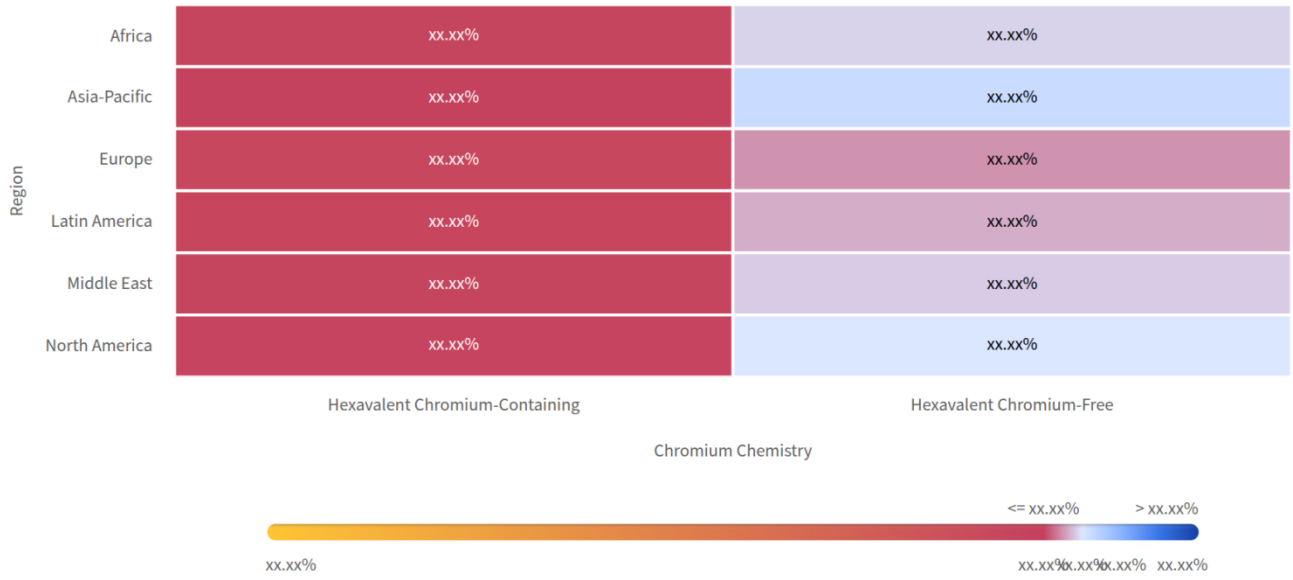

Table 186. Global Chemical Surface Treatment Market, by Region growth contribution, 2025-2032

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Scope total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 187. Global Chemical Surface Treatment Market Size, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Asia-Pacific	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Europe	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latin America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Middle East	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North America	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. Metal Finishing Effluent Guidelines

   · Applicable U.S. metal-finishing requirements are incorporated into direct-discharge permits or indirect-discharge control mechanisms.
   ([epa.gov](https://www.epa.gov/eg/metal-finishing-effluent-guidelines))

2. Authorisation

   · EU authorization is use-specific rather than a general permission for a chemical category.
   ([single-market-economy.ec.europa.eu](https://single-market-economy.ec.europa.eu/sectors/chemicals/reach/authorisation_en))

3. UK REACH explained

   · HSE states that UK REACH and EU REACH operate independently.
   ([hse.gov.uk](https://www.hse.gov.uk/reach/about.htm))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.

4. Asia

   · Chemetall's Asia directory identifies production roles in India and China and a sales-office role in Thailand; product-level supply commitments are not stated.
   ([chemetall.com](https://www.chemetall.com/global/en/locations/asia))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.

5. Lei nº 15.022, de 13 de novembro de 2024 - Câmara dos Deputados

   · Brazil's Law xx.xx of November xx.xx 2024 establishes a national chemical inventory and chemical-risk assessment and control framework.
   ([www2.camara.leg.br](https://www2.camara.leg.br/legin/fed/lei/2024/lei-xx.xx-xx.xx-novembro-2024-xx.xx-norma-pl.html))

6. Request Registration of Industrial Input for Customs Duty Exemption

   · The UAE service allows industrial-input registration and customs-exemption applications where the industrial facility holds a valid industrial production license.
   ([moiat.gov.ae](https://moiat.gov.ae/en/services/request-registration-of-industrial-input-for-customs-duty-exemption?search=RG-xx.xx))

7. Africa

   · The Africa directory lists Boksburg production and sales; Algeria, Morocco and Tunisia entries use a French sales-office address. These are directory roles, not delivery guarantees.
   ([chemetall.com](https://www.chemetall.com/global/en/locations/africa?utm_source=openai))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.

8. Occupational Health and Safety Act - Regulations: Hazardous Chemical Agents 2021

   · South Africa's regulations assign SDS provision and labeling responsibilities to covered manufacturers, importers and suppliers.
   ([gov.za](https://www.gov.za/sites/default/files/gcis_document/xx.xx/44348rg11263gon280.pdf))

9. Guidance on the WHMIS supplier requirements

· Canada's WHMIS supplier guidance establishes national requirements for covered hazardous-product documentation.
([canada.ca](https://www.canada.ca/en/health-canada/services/environmental-workplace-health/occupational-health-safety/workplace-hazardous-materials-information-system/supplier-hazard-communication-requirements-whmis/guidance.html))

10. NOM-018-STPS-2015 - Sistema armonizado para la identificación y comunicación de peligros y riesgos por sustancias químicas peligrosas

· Mexico's NOM-xx.xx-STPS-2015 establishes a national workplace chemical hazard-communication framework.
([platiica.economia.gob.mx](https://platiica.economia.gob.mx/wp-content/uploads/sites/xx.xx/PDF_Normas_Publicas/NOM-xx.xx-STPS-2015.pdf))

11. MKS Inc. Annual Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion.
([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

12. Element Solutions Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.

13. Henkel Annual Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded.
([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

14. BASF Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total.
([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

15. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

· Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

16. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

17. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

18. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

19. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

20. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

21. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

22. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

23. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

24. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

25. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

26. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

27. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.
28. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.

29. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.
30. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.

16.1. Asia-Pacific

Table 188. Asia-Pacific Chemical Surface Treatment Market, by Country growth contribution, 2025-2032

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Indonesia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Malaysia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Philippines	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Singapore	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Taiwan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thailand	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Unallocated / remaining scope	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Scope total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 189. Asia-Pacific Chemical Surface Treatment Market Size, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Indonesia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Malaysia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Philippines	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Singapore	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Taiwan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thailand	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 190. Asia-Pacific Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 191. Asia-Pacific Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 192. Asia-Pacific Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 193. Asia-Pacific Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 194. Asia-Pacific Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 195. Asia-Pacific Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 196. Asia-Pacific Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 197. Asia-Pacific Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 198. Asia-Pacific Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 199. Asia-Pacific Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 200. Asia-Pacific Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

3. Henkel Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))
   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))
   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))
10. Freudenberg Chemical Specialities - Business Portfolio and Numbers
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))
11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))
12. Internal Revenue Service - Yearly Average Currency Exchange Rates
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

15. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

16. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17. World Development Indicators - Structure of value added, Table4.2

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing observations constrain Asian industrial exposure separately from wafer-material demand; Taiwan's manufacturing scale is assumed.

18. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Asian destination observations constrain the wafer component; the elsewhere pool requires modeled disaggregation.

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Taiwan materials revenue of USD21.xx.xx anchors a scope-adjusted destination score.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Taiwan materials revenue of USD21.xx.xx anchors a scope-adjusted destination score.

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.

19. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The association distinguishes wafer-fabrication materials from packaging; neither whole category equals the included chemicals.
20. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Singapore manufacturing roles support distinguishing local wafer-related activity from regional sales-office presence.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Singapore manufacturing roles support distinguishing local wafer-related activity from regional sales-office presence.
21. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Directory roles qualify footprint-led regional inference; no office-count allocation is used.
22. MKS Inc. Annual Report 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

23. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

24. SurTec - Value-added Anodizing Portfolio

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

25. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
26. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
27. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

28. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

29. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

30. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

31. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

32. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

33. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

34. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

35. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

36. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

37. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

38. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
39. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
40. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

41. U.S. Census Bureau - Monthly Wholesale Trade Definitions
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
42. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
43. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

16.2. North America

Table 201. North America Chemical Surface Treatment Market, by Country growth contribution, 2025-2032

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Unallocated / remaining scope	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Scope total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 202. North America Chemical Surface Treatment Market Size, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 203. North America Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 204. North America Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 205. North America Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 206. North America Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 207. North America Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 208. North America Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 209. North America Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 210. North America Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 211. North America Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 212. North America Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 213. North America Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

3. Henkel Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

10. Freudenberg Chemical Specialities - Business Portfolio and Numbers

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

12. Internal Revenue Service - Yearly Average Currency Exchange Rates

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology
· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))
15. Entegris, Inc. Form 10-K for the year ended December 31, 2025
· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))
16. BASF Completes Acquisition of Chemetall - December 15, 2016
· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))
17. World Development Indicators - Structure of value added, Table4.2
· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Country GDP and manufacturing proportions constrain the industrial-exposure allocation; scope adjustments are modeled.
· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
18. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
· Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
· Evidence informing base-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US manufacturing scale provides an additional industrial-exposure input where the international table lacks its current proportion.
19. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
· Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD6.xx.xx; modeled scope factors bridge it to wafer-chemical geography.

20. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
21. MKS Inc. Annual Report 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

22. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

23. SurTec - Value-added Anodizing Portfolio

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

24. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
25. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
26. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

27. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

28. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

29. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

30. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

31. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

32. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

33. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

34. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
35. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
36. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

37. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

38. Entegris - Chemical Mechanical Planarization

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))

39. Health and Safety Executive - Post weld cleaning using pickling pastes

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

40. U.S. Census Bureau - Monthly Wholesale Trade Definitions
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
41. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
42. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

16.3. Europe

Table 214. Europe Chemical Surface Treatment Market, by Country growth contribution, 2025-2032

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Austria	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Belgium	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Denmark	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Finland	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Netherlands	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Norway	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Poland	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Portugal	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sweden	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Switzerland	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Unallocated / remaining scope	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Scope total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 215. Europe Chemical Surface Treatment Market Size, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Austria	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Belgium	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Denmark	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Finland	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Netherlands	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Norway	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Poland	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Portugal	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sweden	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Switzerland	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 216. Europe Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 217. Europe Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 218. Europe Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 219. Europe Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 220. Europe Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 221. Europe Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 222. Europe Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 223. Europe Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 224. Europe Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 225. Europe Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 226. Europe Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial commentary identifies European volume weakness, qualifying uniform industrial growth.
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

3. Henkel Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

10. Freudenberg Chemical Specialities - Business Portfolio and Numbers

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

12. Internal Revenue Service - Yearly Average Currency Exchange Rates

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))
15. Entegris, Inc. Form 10-K for the year ended December 31, 2025
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))
16. BASF Completes Acquisition of Chemetall - December 15, 2016
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))
17. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: European manufacturing scale supports country exposure scores; Bulgaria's manufacturing proportion remains assumed.
18. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2025 semiconductor materials destination revenue is USD4.xx.xx; it is a proxy, not chemical-market revenue.
19. SEMI 中国 - SEMI 报告：2025 年全球半导体材料市场销售额创下 732 亿美元历史新高, May13,2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Europe was the exception to regional materials growth in2025, qualifying uniform geographic-growth assumptions.
20. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
21. Health and Safety Executive - UK REACH explained
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jurisdictional separation constrains the regulatory interpretation of the modeled European allocation.

22. MKS Inc. Annual Report 2025

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

23. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

24. SurTec - Value-added Anodizing Portfolio
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

25. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
26. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
27. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

28. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

29. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

30. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

31. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

32. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

33. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

34. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

35. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
36. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
37. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

38. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
39. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
40. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

41. U.S. Census Bureau - Monthly Wholesale Trade Definitions

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))

42. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))

43. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

16.4. Middle East

Table 227. Middle East Chemical Surface Treatment Market, by Country growth contribution, 2025-2032

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Israel	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Qatar	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Saudi Arabia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Turkey	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Unallocated / remaining scope	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Arab Emirates	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Scope total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 228. Middle East Chemical Surface Treatment Market Size, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Israel	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Qatar	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Saudi Arabia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Turkey	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Arab Emirates	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 229. Middle East Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 230. Middle East Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 231. Middle East Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 232. Middle East Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 233. Middle East Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 234. Middle East Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 235. Middle East Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 236. Middle East Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 237. Middle East Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 238. Middle East Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 239. Middle East Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
3. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

10. Freudenberg Chemical Specialities - Business Portfolio and Numbers

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

12. Internal Revenue Service - Yearly Average Currency Exchange Rates

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

15. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

16. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17. World Development Indicators - Structure of value added, Table4.2

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Manufacturing proportions permit exclusions from oil-driven GDP when modeling treatment demand.

18. Intel - How Many Manufacturing Fabs Does Intel Have?, reviewed February6,2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed manufacturing locations support a positive Israeli wafer-demand premise; the score is modeled.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed manufacturing locations support a positive Israeli wafer-demand premise; the score is modeled.

19. MKS Inc. Annual Report 2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

20. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

21. SurTec - Value-added Anodizing Portfolio

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

22. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
23. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
24. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

25. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

26. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

27. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

28. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

29. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

30. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

31. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

32. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

33. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

34. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

35. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
36. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
37. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

38. U.S. Census Bureau - Monthly Wholesale Trade Definitions
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
39. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
40. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

16.5. Latin America

Table 240. Latin America Chemical Surface Treatment Market, by Country growth contribution, 2025-2032

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Argentina	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chile	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colombia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Peru	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Unallocated / remaining scope	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Scope total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 241. Latin America Chemical Surface Treatment Market Size, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Argentina	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chile	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colombia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Peru	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 242. Latin America Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 243. Latin America Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 244. Latin America Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 245. Latin America Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 246. Latin America Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 247. Latin America Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 248. Latin America Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 249. Latin America Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 250. Latin America Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 251. Latin America Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 252. Latin America Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
3. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

10. Freudenberg Chemical Specialities - Business Portfolio and Numbers

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

12. Internal Revenue Service - Yearly Average Currency Exchange Rates

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

15. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

16. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17. World Development Indicators - Structure of value added, Table4.2

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations support Latin American exposure scores, not chemical-sales observations.

18. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.

19. MKS Inc. Annual Report 2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

20. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

21. SurTec - Value-added Anodizing Portfolio

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

22. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
23. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
24. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

25. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

26. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

27. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

28. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

29. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

30. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

31. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

32. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

33. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

34. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

35. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
36. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
37. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

38. U.S. Census Bureau - Monthly Wholesale Trade Definitions
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
39. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
40. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

16.6. Africa

Table 253. Africa Chemical Surface Treatment Market, by Country growth contribution, 2025-2032

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Egypt	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Kenya	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nigeria	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Unallocated / remaining scope	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Scope total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 254. Africa Chemical Surface Treatment Market Size, by Region, 2017-2040 (USD Million)

Region	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Egypt	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Kenya	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nigeria	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 255. Africa Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 256. Africa Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 257. Africa Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 258. Africa Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 259. Africa Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 260. Africa Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 261. Africa Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 262. Africa Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 263. Africa Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 264. Africa Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 265. Africa Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
3. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

10. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

12. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

15. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

16. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17. World Development Indicators - Structure of value added, Table4.2

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: National manufacturing observations constrain African industrial-demand exposure.

18. Chemetall - Africa locations

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Boksburg production/sales and French-address northern African contacts support the role distinction, not destination sales.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Boksburg production/sales and French-address northern African contacts support the role distinction, not destination sales.

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The directory supports differentiated commercial roles within Africa but not an office-based demand split.

19. MKS Inc. Annual Report 2025

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

20. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

21. SurTec - Value-added Anodizing Portfolio

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

22. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
23. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
24. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

25. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

26. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

27. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

28. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

29. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

30. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

31. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

32. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

33. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

34. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

35. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
36. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
37. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

38. U.S. Census Bureau - Monthly Wholesale Trade Definitions
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
39. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
40. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

17. Chemical Surface Treatment Market, by Group

Americas is useful as a coordinated account-management lens, but the relevant purchasing events differ within it. U.S. facility discharge obligations and Brazil's chemical-inventory legislation concern different decision points: continued use at a covered site versus the applicable national chemical framework. [redacted]

Europe, Middle East & Africa requires a distinction between regional commercial coordination and transferable permission. [redacted] Centralization becomes unsuitable when it obscures who must provide the legally applicable documents or maintain the relevant authorization coverage.

[redacted] It does not establish chemical authorization, inventory or customer acceptance. Suppliers should separate the origin-document benefit from destination access and delivery commitments; an imported offering without established preferential eligibility should not be sold on an assumed ASEAN preference.

GCC customs integration and chemical access are separate commercial questions. The published customs-union framework provides common procedures while retaining exceptions for prohibited and restricted goods. [redacted]

[redacted] A shared regional supplier is defensible when it assigns separate country responsibilities and provides the required commercial documentation. Direct

New Zealand sourcing remains preferable where another intermediary would add coordination without assuming the relevant obligations.

Nordic procurement can use a common REACH foundation without assuming identical national administration. Denmark, Finland and Sweden participate through the EU framework, while REACH registration also covers Norway and Iceland through the EEA. ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪ ▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪

European Union analysis supports coordinated review of authorization decisions, not automatic approval of every offering. ▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ An alternative supplier becomes a practical option only when its applicable coverage and account obligations are established.

BRICS is a comparative procurement lens rather than evidence that one country's documentation settles another's requirements. ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪ ▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪ ▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪ These examples do not establish the requirements of every constituent.

G7 is an informal, consensus-based policy grouping, making it more useful for coordinated supplier-risk discussion than as evidence of chemical-access equivalence. The independence of UK and EU REACH illustrates the limit to a common G7 purchasing assumption. ▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪ ▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪

NATO introduces a defense-procurement eligibility lens, not a general chemical sales entitlement. ▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪ ▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪ ▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪ ▪▪ ▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ Membership-related eligibility does not establish a chemical award, product acceptance or continuing purchasing relationship.

These groups overlap with one another and with the regional and country views. ■■■■■ ■■■■■■■■ ■■ ■■■■■■■■■■■■■■ ■■■ ■■■■ ■■■■■■■■ ■■■■■■■■■■■■ ■■■ ■■■■■■ ■■ ■■■■■■■■ ■■■■■■■ ■■■■■■■ ■■■■■■■■ ■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■

Figure 29. Global Chemical Surface Treatment Market Size, by Group, 2025 vs 2026 vs 2032

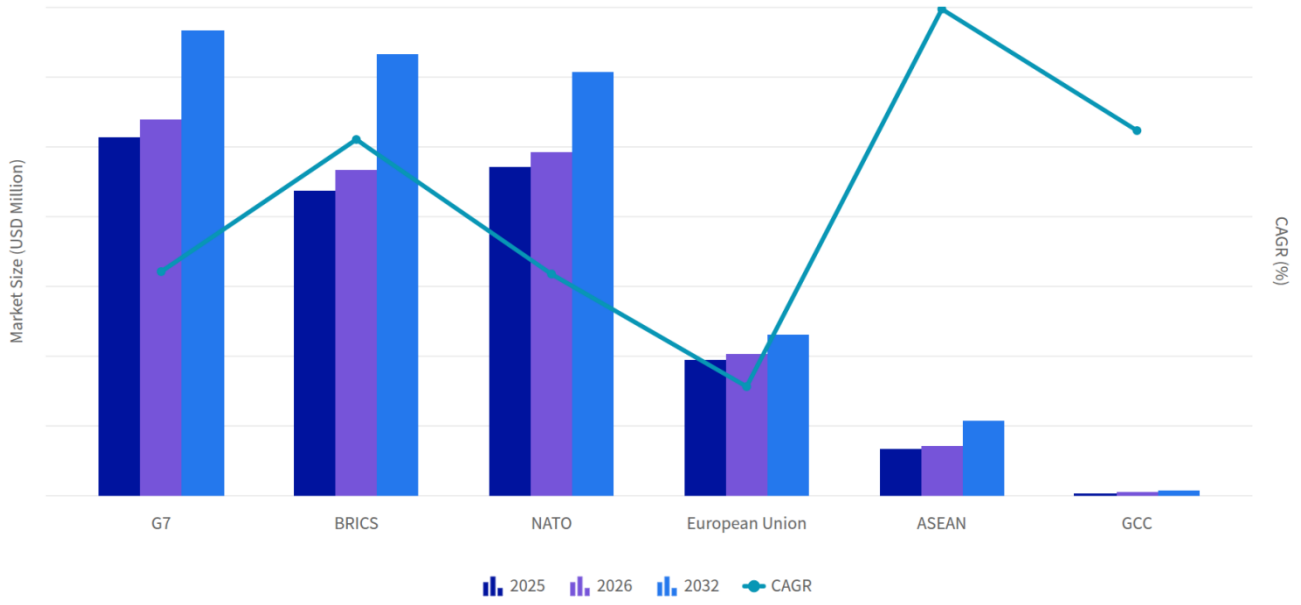

Table 266. Global Chemical Surface Treatment Market Size, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
ASEAN	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
BRICS	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
European Union	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
G7	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
GCC	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
NATO	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Sources & Evidence

1. Metal Finishing Effluent Guidelines
   - The U.S. framework concerns covered facility obligations, providing a different decision point from Brazil's national inventory framework. ([epa.gov](https://www.epa.gov/eg/metal-finishing-effluent-guidelines))
2. Authorisation
   - The common EU framework provides a basis for reviewing the applicable use and decision conditions, not customer acceptance. ([single-market-economy.ec.europa.eu](https://single-market-economy.ec.europa.eu/sectors/chemicals/reach/authorisation_en))
3. UK REACH explained
   - Independent UK and EU regimes limit EMEA and G7 chemical-access generalizations. ([hse.gov.uk](https://www.hse.gov.uk/reach/about.htm))

4. Lei nº 15.022, de 13 de novembro de 2024 - Câmara dos Deputados
   · The Brazilian law provides a national framework relevant to Americas and BRICS comparisons; it does not determine another constituent's requirements.
   ([www2.camara.leg.br](https://www2.camara.leg.br/legin/fed/lei/2024/lei-xx.xx-xx.xx-novembro-2024-xx.xx-norma-pl.html))
5. Occupational Health and Safety Act - Regulations: Hazardous Chemical Agents 2021
   · Covered South African supplier-documentation responsibilities remain national obligations relevant to EMEA and BRICS account arrangements.
   ([gov.za](https://www.gov.za/sites/default/files/gcis_document/xx.xx/44348rg11263gon280.pdf))
6. Electronic Exchange of Form D via the ASEAN Single Window
   · Singapore Customs describes ATIGA electronic Form D exchange through the ASEAN Single Window for preferential-origin claims with named ASEAN destinations.
   ([customs.gov.sg](https://www.customs.gov.sg/doing-business/rules-of-origin/origin-documentation/electronic-exchange-of-form-d-via-the-asean-single-window/))
7. The Customs Union of the GCC Member States
   · The published GCC customs-union framework combines common procedures with prohibited- and restricted-goods exceptions and contains historical transitional provisions.
   ([gcc-sg.org](https://gcc-sg.org/en/MediaCenter/DigitalLibrary/Documents/xx.xx.pdf))
8. Basics of importing and manufacturing chemicals
   · AICIS generally requires registration of the introducing business and categorization of industrial-chemical introductions; business registration is not product registration.
   ([industrialchemicals.gov.au](https://www.industrialchemicals.gov.au/business/getting-started-registration-importing-and-manufacturing/basics-importing-and-manufacturing-chemicals))
9. Hazardous substances import controls
   · New Zealand Customs states that applicable hazardous substances require HSNO approval before import and distinguishes excluded items.
   ([customs.govt.nz](https://www.customs.govt.nz/business/import/import-prohibited-and-restricted-imports/hazardous-substances-import-controls))
10. Guide till Reach-registrering
    · Sweden's chemicals authority identifies the EU/EEA REACH registration area as including Norway and Iceland.
    ([kemi.se](https://www.kemi.se/lagar-och-regler/lagstiftningar-inom-kemikalieomradet/eu-gemensam-lagstiftning/reach-forordningen/registrering-i-reach-forordningen/guide-till-reach-registrering))
11. The Product Register - about declaration of chemicals
    · Norway's Product Register duties for specified chemicals apply in addition to REACH and CLP notification duties.
    ([environmentagency.no](https://www.environmentagency.no/areas-of-activity/product-register/declaration-of-chemicals/))
12. Minister of International Trade - Briefing book
    · Global Affairs Canada's briefing describes G7 as an informal consensus-based grouping that coordinates positions and catalyzes action.
    ([international.gc.ca](https://www.international.gc.ca/transparency-transparence/briefing-documents-information/briefing-books-cahiers-breffage/2025-xx.xx-trade-commerce.aspx?lang=eng))
13. Procurement Opportunities
    · NATO states that eligibility is specified by each procurement call; opportunities generally concern firms registered in member nations, with exceptions.
    ([nato.int](https://www.nato.int/en/work-with-us/business-and-project-opportunities/procurement-opportunities))
14. MKS Inc. Annual Report 2025
    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion.
    ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

15. Element Solutions Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

16. Henkel Annual Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded.
([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

17. BASF Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total.
([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

18. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products.
([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

· Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption.
([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

19. Nihon Parkerizing Integrated Report 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction.
([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

20. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion.
([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

21. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation.
([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

22. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

23. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

24. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

25. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

26. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

· Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

· Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

27. SEMI Materials Market Data Subscription - Coverage and Methodology
· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

28. Entegris, Inc. Form 10-K for the year ended December 31, 2025
· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

29. BASF Completes Acquisition of Chemetall - December 15, 2016
· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17.1. G7

Table 267. G7 Chemical Surface Treatment Market, by Country growth contribution, 2025-2032

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Scope total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 268. G7 Chemical Surface Treatment Market Size, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 269. G7 Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 270. G7 Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 271. G7 Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 272. G7 Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 273. G7 Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 274. G7 Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 275. G7 Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 276. G7 Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 277. G7 Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 278. G7 Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 279. G7 Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

3. Henkel Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

10. Freudenberg Chemical Specialities - Business Portfolio and Numbers

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

12. Internal Revenue Service - Yearly Average Currency Exchange Rates

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

15. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

16. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17. World Development Indicators - Structure of value added, Table4.2

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.

18. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.

19. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.

20. BLS - State Employment and Unemployment, July2025, Table3

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

21. STMicroelectronics - Our strategic programs

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.

22. Health and Safety Executive - UK REACH explained

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.

23. MKS Inc. Annual Report 2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

24. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

25. SurTec - Value-added Anodizing Portfolio

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

26. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
27. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
28. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

29. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

30. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

31. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

32. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

33. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

34. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

35. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

RESEARCH SAMPLE REPORT

36. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

37. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

38. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

39. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
40. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
41. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

42. U.S. Census Bureau - Monthly Wholesale Trade Definitions
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
43. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
44. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

17.2. NATO

Table 280. NATO Chemical Surface Treatment Market, by Country growth contribution, 2025-2032

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Albania	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Belgium	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Bulgaria	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Croatia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Czech Republic	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Denmark	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Estonia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Finland	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Greece	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hungary	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Iceland	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latvia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Lithuania	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Luxembourg	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Montenegro	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Netherlands	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North Macedonia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Norway	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Poland	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Portugal	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Romania	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Slovakia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Slovenia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sweden	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 280 - continued

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Turkey	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Scope total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 281. NATO Chemical Surface Treatment Market Size, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Albania	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Belgium	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Bulgaria	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Croatia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Czech Republic	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Denmark	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Estonia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Finland	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Greece	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hungary	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Iceland	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latvia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Lithuania	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Luxembourg	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Montenegro	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Netherlands	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
North Macedonia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Norway	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Poland	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 281 - continued

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Portugal	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Romania	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Slovakia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Slovenia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sweden	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Turkey	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 282. NATO Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 283. NATO Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 284. NATO Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 285. NATO Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 286. NATO Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 287. NATO Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 288. NATO Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 289. NATO Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 290. NATO Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 291. NATO Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 292. NATO Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

3. Henkel Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

10. Freudenberg Chemical Specialities - Business Portfolio and Numbers

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

12. Internal Revenue Service - Yearly Average Currency Exchange Rates

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

15. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

16. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17. World Development Indicators - Structure of value added, Table4.2

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.

18. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.

19. BLS - State Employment and Unemployment, July2025, Table3

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

20. STMicroelectronics - Our strategic programs

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.

21. Health and Safety Executive - UK REACH explained

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.

22. MKS Inc. Annual Report 2025

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

23. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

24. SurTec - Value-added Anodizing Portfolio

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

25. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
26. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
27. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

28. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

29. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

30. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

31. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

32. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

33. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

34. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

35. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

36. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

37. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

38. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
39. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
40. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

41. U.S. Census Bureau - Monthly Wholesale Trade Definitions

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))

42. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))

43. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

17.3. BRICS

Table 293. BRICS Chemical Surface Treatment Market, by Country growth contribution, 2025-2032

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Scope total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 294. BRICS Chemical Surface Treatment Market Size, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Africa	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 295. BRICS Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 296. BRICS Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 297. BRICS Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 298. BRICS Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 299. BRICS Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 300. BRICS Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 301. BRICS Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 302. BRICS Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 303. BRICS Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 304. BRICS Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 305. BRICS Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

3. Henkel Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

10. Freudenberg Chemical Specialities - Business Portfolio and Numbers

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

12. Internal Revenue Service - Yearly Average Currency Exchange Rates

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

15. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

16. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.

18. Chemetall - Asia locations

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.

19. Chemetall - Africa locations

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Boksburg production/sales and French-address northern African contacts support the role distinction, not destination sales.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Boksburg production/sales and French-address northern African contacts support the role distinction, not destination sales.

20. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.

21. MKS Inc. Annual Report 2025

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

22. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

23. SurTec - Value-added Anodizing Portfolio

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

24. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
25. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
26. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

27. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

28. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

29. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

30. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

31. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

32. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

33. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

34. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
35. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
36. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

37. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
38. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
39. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

40. U.S. Census Bureau - Monthly Wholesale Trade Definitions
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
41. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
42. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

17.4. European Union

Table 306. European Union Chemical Surface Treatment Market, by Country growth contribution, 2025-2032

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Austria	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Belgium	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Bulgaria	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Croatia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cyprus	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Czech Republic	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Denmark	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Estonia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Finland	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Greece	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hungary	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Ireland	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latvia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Lithuania	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Luxembourg	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Malta	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Netherlands	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Poland	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Portugal	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Romania	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Slovakia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Slovenia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sweden	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Scope total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 307. European Union Chemical Surface Treatment Market Size, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Austria	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Belgium	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Bulgaria	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Croatia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cyprus	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Czech Republic	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Denmark	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Estonia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Finland	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Greece	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hungary	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Ireland	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Latvia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Lithuania	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Luxembourg	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Malta	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Netherlands	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Poland	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Portugal	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Romania	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Slovakia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Slovenia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sweden	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 308. European Union Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 309. European Union Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 310. European Union Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 311. European Union Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 312. European Union Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 313. European Union Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 314. European Union Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 315. European Union Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 316. European Union Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 317. European Union Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 318. European Union Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
3. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

10. Freudenberg Chemical Specialities - Business Portfolio and Numbers

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

12. Internal Revenue Service - Yearly Average Currency Exchange Rates

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

15. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

16. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17. Intel - How Many Manufacturing Fabs Does Intel Have?, reviewed February6,2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed manufacturing locations support the existence of relevant buyers, not their chemical expenditure or exact allocation weights.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed manufacturing locations support the existence of relevant buyers, not their chemical expenditure or exact allocation weights.

18. STMicroelectronics - Our strategic programs

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.

19. MKS Inc. Annual Report 2025

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

20. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

21. SurTec - Value-added Anodizing Portfolio

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

22. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
23. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
24. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

25. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

26. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

27. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

28. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

29. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

30. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

31. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

32. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

33. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

34. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

35. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
36. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
37. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

38. U.S. Census Bureau - Monthly Wholesale Trade Definitions
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
39. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
40. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

17.5. ASEAN

Table 319. ASEAN Chemical Surface Treatment Market, by Country growth contribution, 2025-2032

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Brunei	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cambodia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Indonesia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Lao People's Democratic Republic	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Malaysia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Myanmar	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Philippines	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Singapore	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thailand	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Vietnam	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Scope total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 320. ASEAN Chemical Surface Treatment Market Size, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Brunei	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cambodia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Indonesia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Lao People's Democratic Republic	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Malaysia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Myanmar	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Philippines	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Singapore	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thailand	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Vietnam	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 321. ASEAN Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 322. ASEAN Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 323. ASEAN Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 324. ASEAN Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 325. ASEAN Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 326. ASEAN Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 327. ASEAN Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 328. ASEAN Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 329. ASEAN Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 330. ASEAN Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 331. ASEAN Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
3. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

10. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

12. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

15. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

16. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17. STMicroelectronics - Our strategic programs

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Singapore manufacturing roles support distinguishing local wafer-related activity from regional sales-office presence.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Singapore manufacturing roles support distinguishing local wafer-related activity from regional sales-office presence.

18. MKS Inc. Annual Report 2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

19. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

20. SurTec - Value-added Anodizing Portfolio

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

21. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
22. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
23. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

24. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

25. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

26. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

27. Atotech - BluCr, Trivalent Hard Chrome Technology

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

28. EASA - REACH and Aviation

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

29. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

30. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

31. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

32. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

33. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

34. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
35. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
36. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

37. U.S. Census Bureau - Monthly Wholesale Trade Definitions
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
38. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
39. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

17.6. GCC

Table 332. GCC Chemical Surface Treatment Market, by Country growth contribution, 2025-2032

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Bahrain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Kuwait	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Oman	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Qatar	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Saudi Arabia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Arab Emirates	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Scope total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 333. GCC Chemical Surface Treatment Market Size, by Group, 2017-2040 (USD Million)

Group	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Bahrain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Kuwait	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Oman	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Qatar	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Saudi Arabia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Arab Emirates	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 334. GCC Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 335. GCC Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 336. GCC Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 337. GCC Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 338. GCC Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 339. GCC Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 340. GCC Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 341. GCC Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 342. GCC Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 343. GCC Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 344. GCC Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
3. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

10. Freudenberg Chemical Specialities - Business Portfolio and Numbers

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

12. Internal Revenue Service - Yearly Average Currency Exchange Rates

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

15. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

16. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17. MKS Inc. Annual Report 2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

18. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

19. SurTec - Value-added Anodizing Portfolio

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

20. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
21. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
22. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

23. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

24. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

25. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

26. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

27. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

28. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

29. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

30. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

31. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

32. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

33. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
34. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
35. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

36. U.S. Census Bureau - Monthly Wholesale Trade Definitions
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
37. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
38. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

18. Chemical Surface Treatment Market, by Country

[redacted] Buyers should make compliant document delivery an express supplier obligation before supply begins. A common commercial account remains possible, but only with the required country documents rather than an English-only global template.

[redacted] A supplier change should therefore trigger confirmation of applicable coverage and notification responsibility. Retaining the chemical category is not sufficient evidence that the new commercial relationship is covered.

[redacted] Exporters should establish the offering's status and responsible entities before choosing distributor-led supply or a separately represented direct relationship. The latter can preserve the manufacturer interface but requires explicit allocation of continuing obligations.

New Zealand distinguishes substance approval from the importing entity's continuing information duties. Requirements effective January xx.xx 2026 call for covered hazardous-substance importers and manufacturers to provide business information within xx.xx days of their first import or manufacture and update changes within xx.xx days. [redacted]

Figure 30. Global Chemical Surface Treatment Market Size, by Country, 2025 vs 2032 (%)

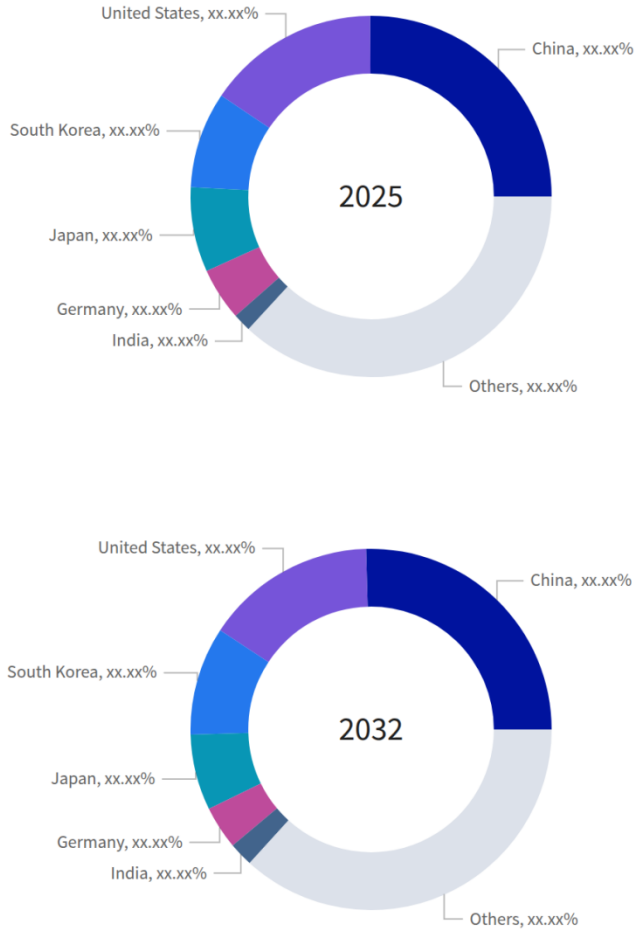

Figure 31. Global Chemical Surface Treatment Market Size, by Country, 2025 vs 2026 vs 2032

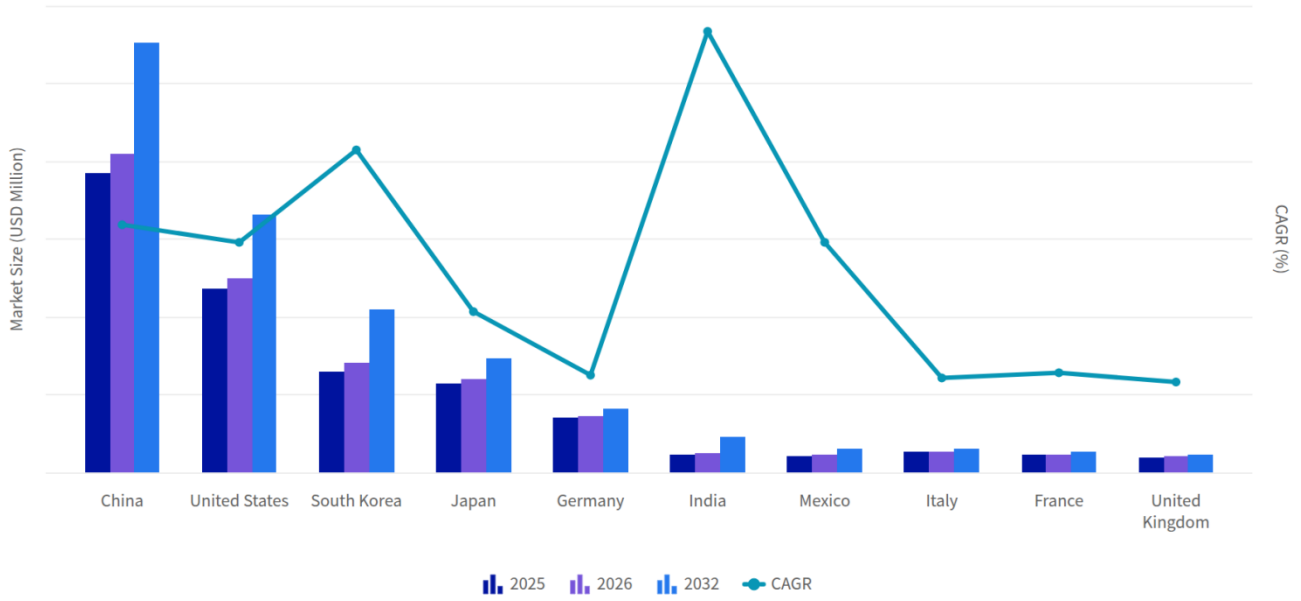

Table 345. Global Chemical Surface Treatment Market, by Country growth contribution, 2025-2032

Category	2025 value (USD Million)	2032 value (USD Million)	Added value (USD Million)	2025 share (%)	2032 share (%)	Change (pp)	Growth share (%)	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Unallocated / remaining scope	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Scope total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 346. Global Chemical Surface Treatment Market Size, by Country, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Brazil	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Canada	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
China	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
France	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Germany	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
India	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Italy	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Japan	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Mexico	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Russia	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
South Korea	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Spain	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United Kingdom	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Others	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. UK REACH explained

   · UK REACH governs Great Britain; EU REACH continues to apply in Northern Ireland. ([hse.gov.uk](https://www.hse.gov.uk/reach/about.htm))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.

2. Downstream user obligations

   · Covered downstream users relying on upstream authorization must notify HSE within three months of receipt after publication of the authorization decision. ([hse.gov.uk](https://www.hse.gov.uk/REACH/authorisation-downstream.htm))

3. Guidance on the WHMIS supplier requirements

   · Covered Canadian SDSs require English and French; providing only a website address or hyperlink is not acceptable delivery. ([canada.ca](https://www.canada.ca/en/health-canada/services/environmental-workplace-health/occupational-health-safety/workplace-hazardous-materials-information-system/supplier-hazard-communication-requirements-whmis/guidance.html?utm_source=openai))

4. NOM-018-STPS-2015 - Sistema armonizado para la identificación y comunicación de peligros y riesgos por sustancias químicas peligrosas

   · Section xx.xx requires safety data sheets to be prepared or available in Spanish. ([platiica.economia.gob.mx](https://platiica.economia.gob.mx/wp-content/uploads/sites/xx.xx/PDF_Normas_Publicas/NOM-xx.xx-STPS-2015.pdf))

5. 新化学物质环境管理登记办法 - Measures for Environmental Management Registration of New Chemical Substances

   · Article xx.xx permits an overseas producer or trader to apply through a legally registered domestic agent sharing registration and subsequent responsibilities; the rules distinguish new from existing substances. ([mee.gov.cn](https://www.mee.gov.cn/gzk/gz/xx.xx/t20211211_963807.shtml))

6. Consolidated Hazardous Substances (Importers and Manufacturers) Notice 2015

   · Requirements effective January xx.xx 2026 require covered importer and manufacturer business information within xx.xx days of first activity and updates within xx.xx days; relevant workplace own-use imports are included. ([epa.govt.nz](https://www.epa.govt.nz/hazardous-substances/rules-notices-and-how-to-comply/epa-notices-rules-you-must-follow/importers-and-manufacturers-notice/))

7. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

8. Element Solutions Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

   · Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

   · Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.

9. Henkel Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

10. BASF Report 2025

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

11. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

    · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

12. Nihon Parkerizing Integrated Report 2025

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

13. Nippon Paint Holdings - Our Business Areas

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

14. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

15. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

16. Freudenberg Chemical Specialities - Business Portfolio and Numbers

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

17. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

18. Internal Revenue Service - Yearly Average Currency Exchange Rates

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

19. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

    · Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

    · Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

    · Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

    · Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

20. SEMI Materials Market Data Subscription - Coverage and Methodology

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

21. Entegris, Inc. Form 10-K for the year ended December 31, 2025

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

22. BASF Completes Acquisition of Chemetall - December 15, 2016

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

23. World Development Indicators - Structure of value added, Table4.2
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.
24. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.
25. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.
26. BLS - State Employment and Unemployment, July2025, Table3
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.
27. STMicroelectronics - Our strategic programs
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.

28. Chemetall - Asia locations
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.
29. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.

18.1. China

Table 347. China Chemical Surface Treatment Market Size, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
China	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 348. China Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 349. China Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 350. China Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 351. China Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 352. China Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 353. China Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 354. China Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 355. China Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 356. China Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 357. China Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 358. China Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Reported China sales constrain the geographic plausibility check but include excluded products.
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

3. Henkel Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

10. Freudenberg Chemical Specialities - Business Portfolio and Numbers

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

12. Internal Revenue Service - Yearly Average Currency Exchange Rates

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

15. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

16. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: China materials revenue of USD15.xx.xx anchors a scope-adjusted destination score.

18. MKS Inc. Annual Report 2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

19. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

20. SurTec - Value-added Anodizing Portfolio

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

21. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
22. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
23. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

24. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

25. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

26. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

27. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

28. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

29. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

30. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

31. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

32. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

33. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

34. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
35. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
36. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

RESEARCH SAMPLE REPORT

37. U.S. Census Bureau - Monthly Wholesale Trade Definitions
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
38. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
39. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

18.2. United States

Table 359. United States Chemical Surface Treatment Market Size, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
United States	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx

Table 360. United States Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 361. United States Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 362. United States Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 363. United States Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 364. United States Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 365. United States Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 366. United States Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 367. United States Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 368. United States Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 369. United States Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 370. United States Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: US and China reported country sales provide a mix-sensitive cross-check, not destination-verified treatment-market shares.
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

3. Henkel Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

10. Freudenberg Chemical Specialities - Business Portfolio and Numbers

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

12. Internal Revenue Service - Yearly Average Currency Exchange Rates

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25
    - Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

15. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

16. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17. BEA Survey of Current Business - GDP and the Economy: Third Estimates for the Fourth Quarter of2024, April2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: 2024 manufacturing represented10.xx.xx% of US GDP; this supports a rounded manufacturing-scale bridge, not treatment-chemical revenue.

18. BLS - State Employment and Unemployment, July2025, Table3

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: July2025 manufacturing employment by place of work supplies the complete50-state activity vector; chemical eligibility and forecast weights are modeled.

19. MKS Inc. Annual Report 2025

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

20. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

21. SurTec - Value-added Anodizing Portfolio

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

22. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
23. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
24. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

25. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

26. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

27. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

28. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

29. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

30. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

31. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

32. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

33. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

34. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

35. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
36. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
37. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

38. U.S. Census Bureau - Monthly Wholesale Trade Definitions
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
39. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
40. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

18.3. South Korea

Table 371. South Korea Chemical Surface Treatment Market Size, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
South Korea	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 372. South Korea Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 373. South Korea Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 374. South Korea Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 375. South Korea Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 376. South Korea Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 377. South Korea Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 378. South Korea Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 379. South Korea Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 380. South Korea Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 381. South Korea Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 382. South Korea Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
3. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

10. Freudenberg Chemical Specialities - Business Portfolio and Numbers

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

12. Internal Revenue Service - Yearly Average Currency Exchange Rates

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

15. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

16. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: South Korea materials revenue of USD11.xx.xx anchors a scope-adjusted destination score.

18. MKS Inc. Annual Report 2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

19. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

20. SurTec - Value-added Anodizing Portfolio

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

21. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
22. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
23. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

24. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

25. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

26. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

27. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

28. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

29. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

30. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

31. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

32. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

33. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

34. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
35. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
36. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

37. U.S. Census Bureau - Monthly Wholesale Trade Definitions
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
38. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
39. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

18.4. Japan

Table 383. Japan Chemical Surface Treatment Market Size, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Japan	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 384. Japan Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 385. Japan Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 386. Japan Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 387. Japan Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 388. Japan Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 389. Japan Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 390. Japan Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 391. Japan Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 392. Japan Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 393. Japan Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 394. Japan Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
3. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

10. Freudenberg Chemical Specialities - Business Portfolio and Numbers

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

12. Internal Revenue Service - Yearly Average Currency Exchange Rates

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

15. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

16. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17. SEMI - Semiconductor Materials Market Revenue by Region,2025, May2026

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Japan materials revenue of USD6.xx.xx anchors a scope-adjusted destination score.

18. MKS Inc. Annual Report 2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

19. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

20. SurTec - Value-added Anodizing Portfolio

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

21. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
22. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
23. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

24. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

25. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

26. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

27. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

28. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

29. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

30. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

31. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
32. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
33. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

34. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
35. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
36. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

37. U.S. Census Bureau - Monthly Wholesale Trade Definitions
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
38. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
39. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

18.5. Germany

Table 395. Germany Chemical Surface Treatment Market Size, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Germany	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 396. Germany Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 397. Germany Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 398. Germany Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 399. Germany Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 400. Germany Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 401. Germany Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 402. Germany Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 403. Germany Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 404. Germany Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 405. Germany Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 406. Germany Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
3. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))
   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))
   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))
10. Freudenberg Chemical Specialities - Business Portfolio and Numbers
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))
11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))
12. Internal Revenue Service - Yearly Average Currency Exchange Rates
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

15. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

16. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17. MKS Inc. Annual Report 2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

18. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

19. SurTec - Value-added Anodizing Portfolio

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

20. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
21. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
22. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

23. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

24. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

25. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

26. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

27. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

28. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

29. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

30. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
31. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
32. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

33. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

34. Entegris - Chemical Mechanical Planarization

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))

35. Health and Safety Executive - Post weld cleaning using pickling pastes

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

36. U.S. Census Bureau - Monthly Wholesale Trade Definitions
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
37. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
38. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

18.6. Italy

Table 407. Italy Chemical Surface Treatment Market Size, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Italy	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 408. Italy Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 409. Italy Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 410. Italy Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 411. Italy Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 412. Italy Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 413. Italy Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 414. Italy Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 415. Italy Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 416. Italy Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 417. Italy Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 418. Italy Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

3. Henkel Annual Report 2025

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

10. Freudenberg Chemical Specialities - Business Portfolio and Numbers

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

12. Internal Revenue Service - Yearly Average Currency Exchange Rates

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

15. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

16. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17. STMicroelectronics - Our strategic programs

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed Italian facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.

18. MKS Inc. Annual Report 2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

19. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

20. SurTec - Value-added Anodizing Portfolio

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

21. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
22. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
23. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

24. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

25. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

26. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

27. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

28. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

29. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

30. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

31. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

32. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

33. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

34. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
35. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
36. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

37. U.S. Census Bureau - Monthly Wholesale Trade Definitions

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))

38. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))

39. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

18.7. India

Table 419. India Chemical Surface Treatment Market Size, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
India	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 420. India Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 421. India Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 422. India Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 423. India Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 424. India Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 425. India Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 426. India Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 427. India Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 428. India Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 429. India Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 430. India Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
3. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

10. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

12. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

15. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

16. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17. Chemetall - Asia locations

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The current directory identifies an Indian production role; it does not quantify customer demand or offering-level fulfillment.

18. MKS Inc. Annual Report 2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

19. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

20. SurTec - Value-added Anodizing Portfolio

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

21. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
22. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
23. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

24. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

25. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

26. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

27. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

28. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

29. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

30. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

31. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

32. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

33. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

34. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
35. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
36. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

37. U.S. Census Bureau - Monthly Wholesale Trade Definitions

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))

38. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))

39. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

18.8. France

Table 431. France Chemical Surface Treatment Market Size, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
France	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 432. France Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 433. France Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 434. France Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 435. France Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 436. France Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 437. France Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 438. France Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 439. France Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 440. France Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 441. France Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 442. France Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
3. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))
   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))
   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))
10. Freudenberg Chemical Specialities - Business Portfolio and Numbers
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))
11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))
12. Internal Revenue Service - Yearly Average Currency Exchange Rates
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

15. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

16. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17. STMicroelectronics - Our strategic programs

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Disclosed French facilities support buyer-location and conditional expansion premises, not chemical-sales quantities.

18. MKS Inc. Annual Report 2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

19. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

20. SurTec - Value-added Anodizing Portfolio

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

21. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
22. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
23. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

24. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

25. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

26. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

27. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

28. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

29. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

30. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

31. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

32. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

33. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

34. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
35. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
36. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

37. U.S. Census Bureau - Monthly Wholesale Trade Definitions
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
38. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
39. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

18.9. Mexico

Table 443. Mexico Chemical Surface Treatment Market Size, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Mexico	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 444. Mexico Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 445. Mexico Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 446. Mexico Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 447. Mexico Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 448. Mexico Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 449. Mexico Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 450. Mexico Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 451. Mexico Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 452. Mexico Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 453. Mexico Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 454. Mexico Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
3. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

10. Freudenberg Chemical Specialities - Business Portfolio and Numbers

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

12. Internal Revenue Service - Yearly Average Currency Exchange Rates

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

15. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

16. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17. World Development Indicators - Structure of value added, Table4.2

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Mexico's manufacturing scale supports its treatment-exposure numerator.

18. MKS Inc. Annual Report 2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

19. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

20. SurTec - Value-added Anodizing Portfolio

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

21. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
22. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
23. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

24. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

25. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

26. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

27. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

28. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

29. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

30. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

31. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

32. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

33. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

34. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
35. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
36. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

37. U.S. Census Bureau - Monthly Wholesale Trade Definitions
· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
38. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
39. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024
· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

18.10. United Kingdom

Table 455. United Kingdom Chemical Surface Treatment Market Size, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
United Kingdom	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 456. United Kingdom Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 457. United Kingdom Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 458. United Kingdom Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 459. United Kingdom Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 460. United Kingdom Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 461. United Kingdom Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 462. United Kingdom Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 463. United Kingdom Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 464. United Kingdom Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 465. United Kingdom Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 466. United Kingdom Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
3. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

10. Freudenberg Chemical Specialities - Business Portfolio and Numbers

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

12. Internal Revenue Service - Yearly Average Currency Exchange Rates

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

15. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

16. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17. Health and Safety Executive - UK REACH explained

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Independent UK/EU regimes qualify a common European-access assumption; no measured demand uplift is established.

18. MKS Inc. Annual Report 2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

19. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

20. SurTec - Value-added Anodizing Portfolio

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

21. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
22. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
23. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

24. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

25. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

26. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

27. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

28. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

29. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

30. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

31. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

32. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

33. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

34. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
35. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
36. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

37. U.S. Census Bureau - Monthly Wholesale Trade Definitions
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
38. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
39. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

18.11. Canada

Table 467. Canada Chemical Surface Treatment Market Size, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Canada	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 468. Canada Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 469. Canada Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 470. Canada Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 471. Canada Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 472. Canada Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 473. Canada Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 474. Canada Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 475. Canada Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 476. Canada Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 477. Canada Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 478. Canada Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
3. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

10. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

12. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

15. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

16. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17. World Development Indicators - Structure of value added, Table4.2

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Canada's manufacturing scale is bridged from GDP and its manufacturing proportion.

18. MKS Inc. Annual Report 2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

19. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

20. SurTec - Value-added Anodizing Portfolio
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

21. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
22. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
23. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

24. Sika Aktivator-205 - Product Data Sheet
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))
25. Fujifilm Launches Advanced Packaging CMP Slurry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))
26. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

27. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

28. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

29. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

30. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

31. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

32. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

33. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

34. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
35. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
36. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

RESEARCH SAMPLE REPORT

37. U.S. Census Bureau - Monthly Wholesale Trade Definitions
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
38. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
39. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

18.12. Brazil

Table 479. Brazil Chemical Surface Treatment Market Size, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Brazil	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 480. Brazil Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 481. Brazil Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 482. Brazil Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 483. Brazil Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 484. Brazil Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 485. Brazil Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 486. Brazil Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 487. Brazil Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 488. Brazil Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 489. Brazil Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 490. Brazil Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
3. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

10. Freudenberg Chemical Specialities - Business Portfolio and Numbers

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

12. Internal Revenue Service - Yearly Average Currency Exchange Rates

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

15. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

16. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17. OICA correspondents survey - World Motor Vehicle Production by Country/Region and Type,2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Brazil association-origin vehicle-production observation offers an industrial-direction check; vehicle output is not chemical revenue and commercially sourced country rows are excluded.

18. MKS Inc. Annual Report 2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

19. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

20. SurTec - Value-added Anodizing Portfolio
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
    ([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

21. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
22. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
23. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

24. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

25. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

26. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

27. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

28. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

29. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

30. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

31. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

32. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

33. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

34. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
35. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
36. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

37. U.S. Census Bureau - Monthly Wholesale Trade Definitions
· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
38. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
39. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024
· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

18.13. Russia

Table 491. Russia Chemical Surface Treatment Market Size, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Russia	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 492. Russia Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 493. Russia Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 494. Russia Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 495. Russia Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 496. Russia Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 497. Russia Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 498. Russia Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 499. Russia Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 500. Russia Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 501. Russia Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 502. Russia Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
3. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

10. Freudenberg Chemical Specialities - Business Portfolio and Numbers

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

12. Internal Revenue Service - Yearly Average Currency Exchange Rates

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

15. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

16. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17. MKS Inc. Annual Report 2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

18. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

19. SurTec - Value-added Anodizing Portfolio

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

20. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
21. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
22. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

23. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

24. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

25. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

26. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

27. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

28. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

29. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

30. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))

31. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))

32. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

33. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
34. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
35. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

36. U.S. Census Bureau - Monthly Wholesale Trade Definitions

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))

37. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))

38. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

18.14. Spain

Table 503. Spain Chemical Surface Treatment Market Size, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Spain	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 504. Spain Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 505. Spain Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 506. Spain Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 507. Spain Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 508. Spain Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 509. Spain Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 510. Spain Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 511. Spain Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 512. Spain Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 513. Spain Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 514. Spain Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025
   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
3. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

10. Freudenberg Chemical Specialities - Business Portfolio and Numbers

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

12. Internal Revenue Service - Yearly Average Currency Exchange Rates

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

15. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

16. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17. MKS Inc. Annual Report 2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

18. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

19. SurTec - Value-added Anodizing Portfolio

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

20. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
21. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
22. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

23. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

24. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

25. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

26. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

27. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

28. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

29. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

30. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
31. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
32. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

33. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
34. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
35. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

36. U.S. Census Bureau - Monthly Wholesale Trade Definitions
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))
37. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
38. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

18.15. Australia

Table 515. Australia Chemical Surface Treatment Market Size, 2017-2040 (USD Million)

Country	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Australia	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 516. Australia Chemical Surface Treatment Market Size, by Product Function, 2017-2040 (USD Million)

Product Function	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion-Promoting Pretreatments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Anodizing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Cleaners and Degreasers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Colorants and Coloring Additives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conditioners and Activators	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Conversion Coating and Passivation Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion Inhibitors and Rust Preventives	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Etchants	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Galvanizing Fluxes	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metal-Deposition Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pickling and Descaling Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polishing and Brightening Agents	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Sealing Chemicals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Strippers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 517. Australia Chemical Surface Treatment Market Size, by Treatment Platform, 2017-2040 (USD Million)

Treatment Platform	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Electrolytic Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonelectrolytic Chemical Treatment	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 518. Australia Chemical Surface Treatment Market Size, by Treatment Objective, 2017-2040 (USD Million)

Treatment Objective	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Adhesion and Joining Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Appearance and Optical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Biological Interface Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Corrosion and Chemical Resistance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Dimensional and Surface Texture Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Surface Cleanliness and Contamination Control	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Thermal Management	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Wear and Friction Performance	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 519. Australia Chemical Surface Treatment Market Size, by End-Use Industry, 2017-2040 (USD Million)

End-Use Industry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Aerospace and Defense	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Building and Construction	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Electrical and Electronics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Household and Recreational Goods	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Industrial Machinery, Tools, and Instruments	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Jewelry, Personal Accessories, and Coinage	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Medical and Dental Devices	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals and Metal Products	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Packaging and Containers	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Printing and Graphic Arts	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Rail and Marine Transportation	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Road Vehicles	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 520. Australia Chemical Surface Treatment Market Size, by Buyer Operating Model, 2017-2040 (USD Million)

Buyer Operating Model	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Captive Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Contract Finishing Operations	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 521. Australia Chemical Surface Treatment Market Size, by Supply Form, 2017-2040 (USD Million)

Supply Form	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Dry Solids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Liquids	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Pastes and Gels	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 522. Australia Chemical Surface Treatment Market Size, by Sales Channel, 2017-2040 (USD Million)

Sales Channel	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Direct Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Distributor and Reseller Sales	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 523. Australia Chemical Surface Treatment Market Size, by Substrate Material, 2017-2040 (USD Million)

Substrate Material	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Glass and Ceramics	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Polymers and Polymer Composites	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Semiconductor Materials	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 524. Australia Chemical Surface Treatment Market Size, by Metals, 2017-2040 (USD Million)

Metals	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Ferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Nonferrous Metals	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 525. Australia Chemical Surface Treatment Market Size, by Chromium Chemistry, 2017-2040 (USD Million)

Chromium Chemistry	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Hexavalent Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Hexavalent Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Table 526. Australia Chemical Surface Treatment Market Size, by Hexavalent Chromium-Free, 2017-2040 (USD Million)

Hexavalent Chromium-Free	2017	2024	2025	2026	2027	2032	2040	CAGR (%)
Chromium-Containing	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Chromium-Free	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Total	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**	**xx.xx**

Sources & Evidence

1. MKS Inc. Annual Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Materials Solutions revenue was USD xx.xx, including USD xx.xx of products and USD xx.xx of services. Product revenue still includes equipment; the model separately estimates the chemical portion. ([investor.mks.com](https://investor.mks.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

2. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: FY2025 Industrial, Circuitry and Semiconductor Solutions sales were USD xx.xx, USD xx.xx and USD xx.xx. These are scoped supplier inputs, not the market total. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2023 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2023; Circuitry Solutions sales were USD xx.xx. These observations constrain the historical industrial and electronics bridge. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing the 2024 market-value input; displayed series and growth include calculations: Industrial Solutions sales were USD xx.xx in 2024 and included an equipment sale associated with a chemistry agreement, requiring separation of equipment from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial, Circuitry and Semiconductor Solutions disclosures constrain the inherited eligible mixed-finishing supplier cohort, not whole-segment inclusion. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Flat industrial organic sales and raw-material deflation qualify broad pricing-growth assumptions in the modeled protection basket. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Circuitry Solutions and Semiconductor Solutions sales of USD xx.xx and USD xx.xx constrain scope-adjusted electronic-finishing weights. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company reports direct sales and independent distribution, and reacquired ViaForm direct-distribution rights in 2023 for USD xx.xx; consideration is excluded from chemical revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
   - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing identifies independent distributors as a route to customers but does not disclose their percentage of qualifying chemical sales. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
3. Henkel Annual Report 2025
   - Evidence informing the 2025 market-value input; displayed series and growth include calculations: Henkel reported EUR xx.xx of Adhesive Technologies sales in 2025. Only an assumed surface-treatment portion enters the model; adhesives and unrelated coatings are excluded. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/eae43b38b5da9c89268a532af1dfbe4f/data/2025-annual-report.pdf))

4. BASF Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The automotive coatings and surface-treatment disposal business generated approximately EUR xx.xx of 2025 sales. The model estimates a surface-treatment fraction rather than including the coatings total. ([report.basf.com](https://report.basf.com/2025/en/_assets/downloads/full-basf-report-2025-basf-ar25.pdf?h=b6Cp9gox))

5. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Qnity reported USD xx.xx of Semiconductor Technologies sales and USD xx.xx of Interconnect Solutions sales in 2025; both contain substantial excluded products. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing the 2032 market-value input; displayed series and growth include calculations: Semiconductor Technologies volume increased xx.xx% in 2025 while price and mix declined xx.xx%; qualification can take multiple quarters. These observations support a moderated, conditional forecast rather than immediate adoption. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY2025 Interconnect Solutions sales were USD xx.xx, with xx.xx% volume growth and negative xx.xx% price/mix. Only the inherited qualifying fraction enters the allocation. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))

6. Nihon Parkerizing Integrated Report 2025

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nihon Parkerizing reported JPY xx.xx of Chemicals Business sales for its fiscal 2024 reporting period. Lubricants and paints require an estimated scope deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately disclosed Chemicals revenue calibrates the inherited pretreatment cohort without adding engineering or toll-processing sales. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Automotive/steel exposure and the chemical-sales target constrain a slower pretreatment forecast; they do not disclose ferrous share. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical substitution-cost commentary is a counterforce to frictionless replacement, not a current price multiplier or measured transition rate. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))

7. Nippon Paint Holdings - Our Business Areas

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Nippon Paint identifies JPY xx.xx of FY2025 Fine Chemicals revenue, including surface-treatment offerings and adjacent functional materials; the model excludes an assumed adjacent portion. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/company/business_fields/))

8. JCU Financial Results Briefing Material for the Fiscal Year Ended March 2026

- Evidence informing the 2025 market-value input; displayed series and growth include calculations: JCU reported JPY xx.xx of Chemicals Business sales for FY3/xx.xx separately from machinery. Overseas subsidiaries use calendar-2025 reporting; the domestic fiscal-period difference remains a proxy limitation. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx chemical sales of JPY xx.xx and via-filling sales of JPY xx.xx calibrate the modeled deposition weight. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: JPY xx.xx of etching sales supplies a function-specific proxy; it is not Global category revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: POP chemical sales calibrate a bounded plastics-treatment ratio, with an explicitly modeled composite-treatment allowance. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Glass-substrate commercial-development positioning constrains a conditional forecast, not observed 2025 glass-treatment revenue. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: FY3/xx.xx electronic-chemical quarterly sales sum to JPY xx.xx; fiscal timing and scope adjustments remain modeled. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Via-filling and other interconnect chemicals establish an electrical-purpose category, not its Global revenue share. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company separately identifies etching chemicals, supporting a dimensional-purpose mapping distinct from electrical-interconnect deposition. ([jcu-i.com](https://www.jcu-i.com/english/wp-content/uploads/sites/xx.xx/2026/xx.xx/JCU_Financial-Results-Briefing-Material-for-the-Fiscal-Year-Ended-March-2026.pdf))

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026

   · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Uyemura reported JPY xx.xx of external surface-treatment-materials revenue for the year ended March 2026, excluding machinery, processing services and real estate in separate segments. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing base-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

   · Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: External surface-treatment-materials revenue of JPY xx.xx provides the supplier primitive; qualifying scope and electronics-destination fractions remain modeled. ([uyemura.co.jp](https://www.uyemura.co.jp/wordpress/wp-content/uploads/2026/xx.xx/Uyemura_Tanshin_Mar2026_4Q.pdf))

10. Freudenberg Chemical Specialities - Business Portfolio and Numbers

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Freudenberg's Chemical Specialities profile identifies a EUR xx.xx December-2024 business scale spanning surface treatments, lubricants, release agents and food-related products. It is used as a prior-period scope proxy, not wholly included revenue. ([freudenberg.com](https://www.freudenberg.com/company/organization-portfolio/freudenberg-chemical-specialities/surtec))

11. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: Dipsol had approximately USD xx.xx of revenue for the twelve months ended December 2024. The model applies an annual-growth assumption and excludes an assumed service portion; acquisition consideration is not counted as market revenue. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))

12. Internal Revenue Service - Yearly Average Currency Exchange Rates

    · Evidence informing the 2025 market-value input; displayed series and growth include calculations: The 2025 annual-average rates are xx.xx euros and xx.xx yen per USD. Rounded reciprocal conversion inputs are explicitly disclosed in the model. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))

13. SEMI Market Outlook - September 2025, Wafer Fab Materials, slide 25

- Evidence informing the 2022 market-value input; displayed series and growth include calculations: The association chart reports 2022 wet chemicals, CMP materials and photoresist ancillaries of USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2023 market-value input; displayed series and growth include calculations: The corresponding 2023 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2024 market-value input; displayed series and growth include calculations: The corresponding 2024 category estimates are USD xx.xx, xx.xx and xx.xx. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2025 market-value input; displayed series and growth include calculations: Its July-2025 projections are USD xx.xx, xx.xx and xx.xx; these remain forecast inputs, not final 2025 observations. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing the 2026 market-value input; displayed series and growth include calculations: Its 2026 projections are USD xx.xx, xx.xx and xx.xx, supporting the near-term component forecast after scope deductions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Dated wet-chemical projections anchor the eligible semiconductor cleaning pool; its purchased-purpose split is modeled. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Wet-chemical category value constrains semiconductor etchants after inherited scope deductions and assumed function attribution. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: CMP slurry-and-pad projections constrain polishing value after the inherited exclusion of pads. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Photoresist ancillary value constrains eligible stripping chemicals; eligibility and functional splits remain assumptions. ([semi.org](https://www.semi.org/sites/semi.org/files/2025-xx.xx/xx.xx%20Clark%20Tseng_Building%20the%20Future-AI%20Investment%2C%20Equipment%xx.xx%xx.xx%20Materials%20Market%20Outlook.pdf))

14. SEMI Materials Market Data Subscription - Coverage and Methodology

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: The association describes direct collection from material suppliers, global geographic coverage and USD reporting. Exact respondent coverage is not publicly disclosed. Only its own category series is used, not third-party research appearing elsewhere in the presentation. ([semi.org](https://www.semi.org/en/products-services/market-data/mmds))

15. Entegris, Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Entegris Materials Solutions sales were USD xx.xx in 2025 versus USD xx.xx in 2024. Its portfolio combines qualifying chemicals with excluded pads, deposition materials and gases, providing a scope-adjusted supplier cross-check. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/entg-xx.xx.htm))

16. BASF Completes Acquisition of Chemetall - December 15, 2016

· Evidence informing the 2025 market-value input; displayed series and growth include calculations: Chemetall's disclosed calendar-2015 sales were USD xx.xx, providing an older commercial scale check for the modeled surface-treatment business rather than a global market observation. ([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

17. MKS Inc. Annual Report 2025

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Materials Solutions separates product and service revenue; the modeled chemical contribution additionally excludes equipment. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The disclosed portfolio includes both electroless and electrolytic chemistry, supporting purchase-level rather than whole-supplier attribution. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Electronics chemistry growth alongside industrial softness constrains differentiated forecast assumptions; platform fractions remain modeled. ([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

18. Chemetall - Industry
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distinct cleaning offerings support purchased-function mapping; the sales weight remains a modeled basket allocation. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Pickling offerings establish a separate commercial role within the pretreatment basket. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Activation offerings support the conditioning/activation category without establishing interchangeable functions or sales percentages. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Conversion, passivation and multi-metal pretreatment offerings constrain primary-purpose attribution. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Surface corrosion-protection offerings support a bounded preservation category, excluding unrelated supplier activities. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

19. SurTec - Value-added Anodizing Portfolio

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately marketed chemical/electrochemical brightening supports functional classification, not semiconductor equivalence or revenue share.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Anodizing additives establish an active commercial chemical category distinct from associated pretreatment and after-treatment purchases.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Coloring products establish the modeled category's commercial role; value weights remain assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separate sealing families support allocation outside anodizing and coloring, preventing whole-line double counting.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec identifies liquid cleaning and sealing offerings; availability supports the form boundary, not a sales percentage.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: SurTec separately identifies powder cleaning and sealing offerings, supporting nonzero dry-form purchasing assumptions.
([surtec.com](https://www.surtec.com/en/applications/metal-pre-treatment/anodizing-portfolio/))

20. Zaclon - Zinc Ammonium Chloride Fluxes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named commercial galvanizing-flux offerings establish category mapping; historical continuity and value proportions are modeled, not disclosed. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Zaclon markets galvanizing fluxes in solution form; the listing does not measure its value mix. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The same functional family is also marketed in solid form, preventing liquid-only classification of that family. ([zaclon.com](https://www.zaclon.com/flux-zinc-ammonium-chloride))
21. European Commission JRC - Surface Treatment of Metals and Plastics
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The Commission recognizes mixed chemical/electrolytic installations, supporting treatment-purchase rather than whole-installation attribution. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Recognized electrolytic activities coexist with chemical activities; installation presence is not a chemical-sales weight. ([bureau-industrial-transformation.jrc.ec.europa.eu](https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics))
22. Atotech - Desmear and Metallization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The electroless-copper commercial portfolio establishes deposition within the nonelectrolytic platform, not its revenue proportion. ([atotech.com](https://www.atotech.com/products/electronics/desmear-and-metallization/))

23. Sika Aktivator-205 - Product Data Sheet

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The documented adhesion-promoting offering supports eligible pretreatment mapping without including associated adhesive or sealant value. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Named ceramic-screen-print applications support the retained glass/ceramic boundary, not a measured Global material split. ([industry.sika.com](https://industry.sika.com/content/dam/dms/in01/q/sika_aktivator-xx.xx.pdf))

24. Fujifilm Launches Advanced Packaging CMP Slurry

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The September xx.xx 2025 slurry launch supplies an application-specific polishing adoption signal, not category sales or universal acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Supplier-reported semiconductor-customer adoption supports a conditional commercial lead; no incremental revenue is separately added. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

25. MIL-DTL-81706B with Amendment 1 - Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type I explicitly identifies hexavalent-containing conversion materials; the record supports classification, not sales exposure fractions. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Type II excludes hexavalent chromium without establishing absence of all chromium; automatic substitution is not permitted. ([quicksearch.dla.mil](https://quicksearch.dla.mil/WMX/Default.aspx?token=xx.xx))

26. Atotech - BluCr, Trivalent Hard Chrome Technology

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: BluCr is trivalent and hexavalent-free, establishing a chromium-containing branch within the free parent; adoption shares remain modeled.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The trivalent offering demonstrates why hexavalent-free purchases cannot all be classified Chromium-Free.
([atotech.com](https://www.atotech.com/products/general-metal-finishing/wear-resistance/functional-chrome-coatings/blucr/))

27. EASA - REACH and Aviation

- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Historical authorization and approval constraints qualify a rapid universal phaseout assumption; they do not establish present buyer-specific permission.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Aviation acceptance constraints support a conditional, incomplete substitution scenario rather than automatic alternative adoption.
([easa.europa.eu](https://www.easa.europa.eu/en/domains/environment/reach-and-aviation))

28. Atotech Reports Fourth Quarter and Full Year 2020 Results and Provides 2021 Full Year Guidance

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The audited 2020 category table reports USD xx.xx electronics chemistry and USD xx.xx general-metal-finishing chemistry, providing a chemical-only historical mix proxy.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d51918dex991.htm))

29. European Commission Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics - August 2006

- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns automotive xx.xx%; temporal, geographic and chemical-value bridges are modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical activity-volume prior assigns aerospace xx.xx%, not its chemical-sales value share. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The broad treatment-use taxonomy constrains transportation category mapping; its chemical-purchasing weight is assumed. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Industrial equipment receives xx.xx% in the old volume prior; broader machinery exposure is explicitly modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Construction receives xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Containers receive xx.xx% in the old volume prior before chemical-value adjustments. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Medical is a named destination; the medical chemical weight is an assumption-led allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Appliances and furniture establish destination coverage, not chemical-sales weights. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Jewelry and coinage establish destination coverage; purchasing weights remain modeled. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))
- Evidence informing base-year allocation inputs; displayed values and growth are calculated: Printing is a named destination, without a disclosed chemical-sales allocation. ([aida.ineris.fr](https://aida.ineris.fr/sites/aida/files/documents-bref/stm_bref_0806.pdf))

30. U.S. EPA Metal Finishing F006 Benchmark Study - September 1998
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx captive U.S. facilities, used only as a spending-adjusted historical prior. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The historical study describes approximately xx.xx independent finishing facilities, not a current Global purchasing share. ([nepis.epa.gov](https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=901P0600.TXT))
31. U.S. EPA Preliminary Review of the Metal Finishing Category - April 2018
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The selected 2016 site visits included ten captive facilities; selection and size differences prevent direct value-share extrapolation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Eight visited sites were job shops; the sample challenges unadjusted facility-count allocation. ([epa.gov](https://www.epa.gov/sites/default/files/2018-xx.xx/documents/metal-finishing_prelim-review_april-2018.pdf))
32. Surmodics, Inc. Form 10-K for the fiscal year ended September 30, 2024
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The filing separates surface-modification chemical-reagent sales from royalties, services and devices, and identifies hemocompatible coatings. It establishes commercial scope, not the Global biological-purpose share. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Lubricious and hemocompatible properties may coexist; attribution must distinguish friction from biological-interface requirements. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))

33. Surmodics, Inc. Form 10-Q for the period ended March 31, 2025
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Six-month FY2025 Medical Device product sales were USD xx.xx, separate from USD xx.xx performance-coating royalties and USD xx.xx research/development/other revenue; product sales still include excluded devices. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/srdx-xx.xx.htm))
34. Entegris - Chemical Mechanical Planarization
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The company's portfolio distinguishes CMP slurries, excluded pads and post-CMP cleaning products, supporting dimensional versus cleanliness mapping. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Separately identified cleaning solutions support cleanliness attribution without assigning all CMP-related spending to one objective. ([entegris.com](https://www.entegris.com/en/home/our-science/by-industry/microelectronics/semiconductor/cmp.html))
35. Health and Safety Executive - Post weld cleaning using pickling pastes
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: HSE identifies prepared proprietary pickling pastes as a commercial category; its guidance supplies no Global sales weight. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing base-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))
    - Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Welding-consumable and stainless-steel suppliers are identified as a paste-selling route, supporting a bounded specialist-reseller premise. ([hse.gov.uk](https://www.hse.gov.uk/welding/post-weld-cleaning.htm))

36. U.S. Census Bureau - Monthly Wholesale Trade Definitions

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Agents and manufacturers' selling offices are distinct from independent title-taking distributors; the model classifies by economic seller. ([census.gov](https://www.census.gov/wholesale/definitions.html))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Distributors take title, and a wholesaler can make the sale despite manufacturer drop shipment. ([census.gov](https://www.census.gov/wholesale/definitions.html))

37. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada - April 1, 2026

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The April xx.xx 2026 Canadian agreement expands independent distribution of Chemetall general-industrial surface treatments, countering a universal direct-sales migration assumption. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The distributor expansion is counterevidence to assuming all technical chemical sales move direct; no channel revenue percentage is disclosed. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))

38. Boeing Q020 - D1-4426 Approved Process Source, effective October 8, 2024

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: Applicable processor approval does not remove the seller's contractual responsibilities; approval authority is not a buyer-operating-model sales weight. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

· Evidence informing base-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

· Evidence informing forecast-year allocation inputs; displayed values and growth are calculated: The clause constrains covered aerospace purchasing relationships without establishing a universal industry approval or purchasing split. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

19. Competitive Landscape

19.1. Market Share Analysis, 2025

Competitive positioning in Chemical Surface Treatment is application- and account-specific. ▪▪▪▪▪▪ ▪▪ ▪ ▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ An entrant should therefore identify an accepted application and accountable service proposition rather than attempt to displace an incumbent solely by matching a catalog category.

MKS Inc.'s Atotech footprint creates a different participation question from a chemical-only quotation: its advertised regional sales, chemistry-production, and TechCenter roles provide an organized support interface. ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ A specialist can remain a realistic alternative without matching all of an incumbent's adjacent services, provided the account's actual obligations are covered.

Distributor access is consequential but bounded. Azelis's documented Chemetall appointment concerns general industrial applications throughout Canada; Insulectro lists selected Qnity metallization products, and Silmid advertises SOCOMORE surface-treatment products. ▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪

North American network records show how regional participants can matter without an independent worldwide portfolio. ▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ These businesses can be evaluated for local ordering and accountability, but their listings do not establish exclusivity, product availability, or transferable customer acceptance.

Regional propositions are not automatically weaker alternatives. SUGEST's identified treatment catalog and CHIMI ART's cleaning and galvanizing-flux offering create product-specific sourcing inquiries alongside multinational routes. ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪ ▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪

Figure 32. Global Chemical Surface Treatment Market Share, by Key Player, 2025

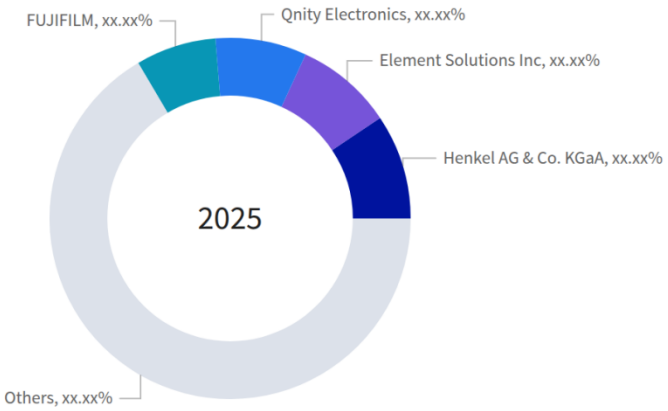

Table 527. Global Chemical Surface Treatment Market Share, by Key Player, 2025

Key Player	Share (%)
Astena Holdings Co., Ltd.	xx.xx
C. Uyemura & Co., Ltd.	xx.xx
Element Solutions Inc	xx.xx
Freudenberg SE	xx.xx
FUJIFILM	xx.xx
Grauer & Weil (India) Limited	xx.xx
Guangdong Guanghua Sci-Tech Co., Ltd.	xx.xx
Guangzhou Sanfu New Materials Technology Co., Ltd.	xx.xx
Henkel AG & Co. KGaA	xx.xx
Ishihara Chemical Co., Ltd.	xx.xx
JCU Corporation	xx.xx
MEC COMPANY LTD.	xx.xx
MKS Inc.	xx.xx
Nihon Parkerizing	xx.xx
Nippon Paint Holdings Co., Ltd.	xx.xx
Okuno Chemical Industries Co., Ltd.	xx.xx
PPG	xx.xx
Qnity Electronics, Inc.	xx.xx
Quaker Houghton	xx.xx
Surventis	xx.xx
Others	xx.xx

Sources & Evidence

1. Industry
   · Chemetall's cleaning and conversion functions overlap candidate purchasing requirements addressed by BONDERITE; equivalence is not established. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
2. General Metal Finishing
   · The regional footprint establishes an organized commercial-support interface, not an individual service guarantee. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/))
3. Terms and Conditions: Q020 - D1-4426 Approved Process Source
   · Boeing Q020 requires approved processing sources for covered work and preserves seller responsibility. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

4. XMAPP Approved Applicators Request
   · The applicator mechanism is commercially distinct from Atotech's supplier-support organization and from chemical resale. ([industrial.macdermidenthone.cn](https://industrial.macdermidenthone.cn/quality-performance-systems/xmapp/xmapp-approved-applicators-request))
5. BONDERITE® - Henkel Adhesives
   · BONDERITE breadth supports a consolidation inquiry, not demonstrated account-specific interchangeability. ([next.henkel-adhesives.com](https://next.henkel-adhesives.com/us/en/our-brands/bonderite.html))
   · Evidence informing base-year company-share estimates: Establishes BONDERITE treatment-chemical functions and an adjacent monitoring offering; supports scope classification, not the assumed eligible revenue fraction. ([next.henkel-adhesives.com](https://next.henkel-adhesives.com/us/en/our-brands/bonderite.html))
6. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada
   · Azelis's April xx.xx 2026 appointment covers Chemetall general industrial applications throughout Canada. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
7. METALLIZATION - Insulectro
   · Insulectro lists selected Qnity-branded metallization products; the listing does not cover every packaging material. ([insulectro.com](https://insulectro.com/metallization/))
8. Metal Treatment - SUGEST
   · The catalog supports a named regional sourcing inquiry, not automatic product acceptance or an origin/delivery advantage. ([sugest.com.sa](https://sugest.com.sa/product-categories/metal-treatment/))
9. Water Treatment, Fuel & Surface Treatment Solutions | CHIMI ART
   · The named portfolio supports a specific sourcing inquiry without establishing product-specific origin, acceptance, or delivery advantage. ([chimiart.com](https://www.chimiart.com/en/solutions))
10. Distributors - Bulk Chemicals
    · BCI's network lists Chemco Products Company, WestChem Technologies, Laring, and Astra Coatings Limited. ([bulkchemicals.us](https://www.bulkchemicals.us/distributors))
11. About Us - Dynamix
    · Dynamix describes chemical manufacture and lists Canadian Finishing Systems, BNAC, Ionic Solutions, and Zinex as distributors. ([dynamix-inc.com](https://dynamix-inc.com/about-us/))
12. General Metal Finishing - WestChem Technologies
    · WestChem advertises general-metal-finishing categories and local Western Canadian commercial support. ([westchem.ca](https://westchem.ca/product-category/general-metal-finishing/))
13. SOCOMORE SOCOSURF Surface Treatment Process | Silmid
    · Silmid advertises SOCOMORE SOCOSURF products through its commercial catalog. ([silmid.com](https://www.silmid.com/brands/socomore/socomore-paints-and-coatings-content/socosurf-surface-treatment-process/))
14. Okuno Chemical Industries - FY2025 Sales Ratio
    · Evidence informing base-year company-share estimates: The company-hosted FY2025 sales-ratio chart reports Metal Finishing at xx.xx%, separately from Life Solution, Advanced Material and Others. This supports the disclosed division-mix proxy replacing the assumed xx.xx% fraction, not a directly observed market share.
15. Okuno Chemical Industries - Employer Company Profile, MyNavi 2027
    · Evidence informing base-year company-share estimates: The employer-authored profile reports JPY xx.xx sales for March 2026 and JPY xx.xx for March 2025. The former supplies the annual sales anchor; calendar-year and consolidated-perimeter adjustments remain modeled.
16. Company Profile - Okuno Chemical Industries Co., Ltd.
    · Evidence informing base-year company-share estimates: The official profile distinguishes metal-finishing chemicals from glass materials, food products and equipment and identifies overseas affiliates. It supports the scope exclusions and the warning against adding affiliate gross turnover.

17. Grauer & Weil (India) Limited - Audited Financial Results for the Quarter and Year Ended March 31, 2025
    - Evidence informing base-year company-share estimates: The May xx.xx 2025 audited-results filing reports consolidated Surface Finishings revenue of INR xx.xx lakh for the year ended March xx.xx 2025, versus INR xx.xx lakh previously, separately from Engineering and Shoppertainment.
    - Evidence informing base-year company-share estimates: This supplies the consolidated segment anchor replacing the older assumed growth bridge; the xx.xx% chemical eligibility and xx.xx% first-sale retention remain assumptions.
18. Electronics - Grauer & Weil (India) Limited
    - Evidence informing base-year company-share estimates: The company identifies manufacture of electronic-plating and PCB chemicals and separately presents chemicals, paints, lubricants and engineering business roles. This supports treatment participation and scope separation, not a numerical chemical-sales fraction.
19. Internal Revenue Service - Yearly Average Currency Exchange Rates
    - Evidence informing base-year company-share estimates: The 2025 annual-average rate is JPY xx.xx per USD, supporting continued use of the inherited rounded USD xx.xx/JPY conversion.
    - Evidence informing base-year company-share estimates: The 2025 annual-average rate is INR xx.xx per USD, used to convert the scope-adjusted Grauer & Weil numerator into nominal USD.
    - Evidence informing base-year company-share estimates: The 2025 annual-average euro rate supports the inherited approximate USD xx.xx/EUR conversion used for Henkel's modeled numerator. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))
    - Evidence informing base-year company-share estimates: The 2025 annual-average euro rate supports the inherited approximate USD xx.xx/EUR conversion used for the Chemetall predecessor numerator. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))
    - Evidence informing base-year company-share estimates: The 2025 annual-average euro rate supports the inherited approximate USD xx.xx/EUR conversion used for eligible Freudenberg chemical sales. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))
    - Evidence informing base-year company-share estimates: The 2025 annual-average yen rate supports the inherited approximate USD xx.xx/JPY conversion used for Nihon Parkerizing's modeled numerator. ([irs.gov](https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates))
    - Evidence informing base-year company-share estimates: The 2025 rate of JPY xx.xx per USD supports the inherited rounded USD xx.xx/JPY conversion.
    - Evidence informing base-year company-share estimates: The 2025 annual-average yen rate supports the common rounded currency bridge applied to the chemical-sales proxy.
    - Evidence informing base-year company-share estimates: The 2025 annual-average yen rate supports conversion of the scope-adjusted materials revenue into nominal USD.
    - Evidence informing base-year company-share estimates: The 2025 annual-average yen rate supports the common rounded conversion of reported calendar-year chemical sales.
    - Evidence informing base-year company-share estimates: The 2025 annual-average yen rate supports conversion of the scope-adjusted segment numerator.
    - Evidence informing base-year company-share estimates: Supplies the 2025 average conversion rate of CNY xx.xx per USD used for the reported chemical-sales numerator.
    - Evidence informing base-year company-share estimates: Supplies the 2025 average conversion rate of CNY xx.xx per USD used for PCB-chemical revenue.
    - Evidence informing base-year company-share estimates: The 2025 yen conversion underlies the inherited rounded USD xx.xx/JPY working convention.
20. Henkel Annual Report 2025
    - Evidence informing base-year company-share estimates: Reports EUR xx.xx of 2025 Adhesive Technologies sales and separate business-area sales, providing financial ceilings for the explicitly modeled treatment-only allocation. ([henkel.de](https://www.henkel.de/resource/blob/xx.xx/e5b32595fccb9c899816cfb539438f41/data/2025-annual-report.pdf))

21. Less energy, more efficiency: Henkel optimizes aluminum anodizing with new additive Bonderite M-AD 2000A

· Evidence informing base-year company-share estimates: The August xx.xx 2025 announcement establishes European commercial availability of the named anodizing additive and distinguishes wider rollout from achieved worldwide sales.
([henkel.com](https://www.henkel.com/press-and-media/press-releases-and-kits/2025-xx.xx-xx.xx-less-energy-more-efficiency-henkel-optimizes-aluminum-anodizing-with-new-additive-bonderite-m-ad-2000a-xx.xx))

22. Portfolio Measures - BASF Report 2025

· Evidence informing base-year company-share estimates: Reports approximately EUR xx.xx of 2025 sales for the disposal perimeter containing automotive OEM coatings, refinish coatings and surface treatment; the treatment fraction is modeled separately.
([report.basf.com](https://report.basf.com/2025/en/combined-managements-report/fundamentals-of-the-group/strategy/material-investments-and-portfolio-measures/portfolio-measures.html))

23. BASF completes acquisition of Chemetall - December 15, 2016

· Evidence informing base-year company-share estimates: Discloses USD xx.xx of calendar-2015 Chemetall sales, used only as a dated commercial scale check for the modeled predecessor numerator.
([basf.com](https://www.basf.com/ca/en/media/News-Releases/2016/xx.xx/P-US-xx.xx-xx.xx))

24. BASF and Carlyle complete coatings transaction

· Evidence informing base-year company-share estimates: Confirms June xx.xx 2026 closing and identifies surface treatment within Surventis, supporting continuous predecessor attribution rather than a pre-entry zero or equity-percentage revenue reduction.
([basf.com](https://www.basf.com/global/en/media/news-releases/2026/xx.xx/p-xx.xx-xx.xx))

25. Surventis launches as an independent global leader in automotive coatings and surface treatment

· Evidence informing base-year company-share estimates: The July xx.xx 2026 launch identifies the former BASF Coatings business and continuity of its brands and organization; its annual-sales description is not substituted for explicitly dated 2025 revenue.
([chemetall.com](https://www.chemetall.com/global/en/about-us/press-releases/2026/Surventis-launches-as-an-independent-global-leader))

26. MKS Inc. Annual Report 2025

· Evidence informing base-year company-share estimates: Reports USD xx.xx Materials Solutions product revenue and USD xx.xx services in 2025; equipment removal remains modeled. Also describes chemistry growth and equipment-associated chemical purchasing.
([investor.mksinst.com](https://investor.mksinst.com/static-files/b9811017-fb6a-xx.xx-a2a7-c14e8fe4c97c))

27. MKS Inc. Investor Presentation - SEC Exhibit 99.1, January 2026

· Evidence informing base-year company-share estimates: Presents approximately xx.xx% consumables within approximately USD xx.xx LTM Q3-2025 revenue, a period- and scope-qualified monetary cross-check rather than direct calendar-2025 chemical revenue.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/d61981dex991.htm))

28. Element Solutions Inc. Form 10-K for the year ended December 31, 2025

· Evidence informing base-year company-share estimates: Reports 2025 Industrial, Circuitry and Semiconductor sales of USD xx.xx, USD xx.xx and USD xx.xx, respectively, with product descriptions and differentiated organic growth supporting the scoped chemical model.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))

29. Freudenberg Group Annual Report 2025

· Evidence informing base-year company-share estimates: Reports Chemical Specialities sales of EUR xx.xx in 2025 versus EUR xx.xx in 2024 and distinguishes SurTec from adjacent businesses; qualifying treatment revenue remains modeled.
([freudenberg.com](https://www.freudenberg.com/fileadmin/01_PDF-FILES/EN/2026_FreudenbergGroup_AnnualReport2025.pdf))

30. About SurTec
· Evidence informing base-year company-share estimates: Identifies SurTec's cleaning, pretreatment and electroplating chemical roles and Freudenberg affiliation, supporting product and ownership scope rather than a numerical sales fraction. ([surtec.com](https://www.surtec.com/en/company/about-surtec/))
31. PPG Industries, Inc. - 2025 Annual Report and Form 10-K
· Evidence informing base-year company-share estimates: Reports USD xx.xx of 2025 Industrial Coatings revenue and locates pretreatment products in automotive OEM and general industrial businesses; both stages of the narrower chemical allocation remain assumptions.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/ppg-xx.xx.htm))
32. Quaker Chemical Corporation - Form 10-K for the year ended December 31, 2025
· Evidence informing base-year company-share estimates: Reports USD xx.xx 2025 sales, Surface solutions at xx.xx%, separately named cleaning and corrosion-inhibitor lines, acquired-period reporting and third-party revenue treatment relevant to eliminating resale and service overlap.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/kwr-xx.xx.htm))
33. Quaker Houghton Expands Advanced Solutions Portfolio Through its Acquisition of Dipsol Chemicals
· Evidence informing base-year company-share estimates: Discloses approximately USD xx.xx of Dipsol revenue for the twelve months ended December xx.xx 2024; used as a specialist scale check, not added to already consolidated 2025 revenue.
([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2510675d1_ex99-xx.xx.htm))
34. Nihon Parkerizing - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026
· Evidence informing base-year company-share estimates: Reports JPY xx.xx Chemicals external sales for the year ended March xx.xx 2026, separately from engineering and processing services, providing a fiscal-period-qualified financial anchor.
([parker.co.jp](https://www.parker.co.jp/ja/_pdf/topics/23d218f2377edcd5920513b94b93ab26bc032e29.pdf))
35. Nihon Parkerizing - Fiscal Year Ended March 2026 Results Presentation, May 28, 2026
· Evidence informing base-year company-share estimates: Identifies calendar-2025 overseas currency-translation coverage, supporting the qualified fiscal-to-calendar bridge rather than claiming an exact calendar-year observation. ([parker.co.jp](https://www.parker.co.jp/ja/_pdf/topics/NP202603result_jp.pdf))
36. Nihon Parkerizing Group Integrated Report 2025
· Evidence informing base-year company-share estimates: Distinguishes chemical supply, engineering and toll processing, and lists rolling oils and paints within the broader chemical portfolio, supporting the need for an eligibility deduction. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))
37. Nippon Paint Holdings - Our Business Areas
· Evidence informing base-year company-share estimates: Reports FY2025 Fine Chemicals revenue of JPY xx.xx and describes both surface-treatment and adjacent functional-material activities; supports the revenue anchor, not the modeled xx.xx% eligibility factor.
38. Nippon Paint Holdings - Surface Treatments
· Evidence informing base-year company-share estimates: Identifies surface-treatment functions and Nippon Paint Surf Chemicals as the operating business, supporting the attribution boundary while not quantifying treatment-only revenue.
39. JCU Corporation - Financial Results Briefing Material for the Fiscal Year Ended March 2026
· Evidence informing base-year company-share estimates: Reports FY3/xx.xx Chemicals Business sales of JPY xx.xx separately from machinery and identifies calendar-2025 reporting for overseas subsidiaries versus a March-year domestic period.
· Evidence informing base-year company-share estimates: Provides separate POP, via-filling and etching sales for a function-specific commercial cross-check; it does not disclose the modeled xx.xx% eligibility factor.
40. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026
· Evidence informing base-year company-share estimates: Reports JPY xx.xx of external Surface Finishing Materials revenue for April 2025-March 2026, separately from machinery, plating-processing services and property rental.
· Evidence informing base-year company-share estimates: Supports the external-sales anchor, not the assumed xx.xx% proprietary and otherwise qualifying materials retention.

41. MEC COMPANY LTD. - Consolidated Financial Results for the Fiscal Year Ended December 31, 2025
    - Evidence informing base-year company-share estimates: The calendar-2025 filing separates chemical sales from machinery, materials and other revenue, supporting the JPY xx.xx chemical-sales anchor and exclusion of adjacent categories.
42. Ishihara Chemical Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026
    - Evidence informing base-year company-share estimates: Reports FY3/xx.xx external sales of JPY xx.xx for metal surface-treatment agents and equipment and JPY xx.xx for automotive chemical products.
    - Evidence informing base-year company-share estimates: Separately identifies electronic materials and industrial-chemical trading, supporting scope exclusions but not the assumed xx.xx% and xx.xx% eligible fractions.
43. Ishihara Chemical - Automotive Chemicals
    - Evidence informing base-year company-share estimates: Establishes the automotive chemical portfolio used to assess eligible cleaning, polishing and preparation activity separately from unrelated car-care offerings; it does not publish the modeled eligible revenue fraction.
44. MEC - Commercial Product Brochure Hosted by Uyemura
    - Evidence informing base-year company-share estimates: A MEC-branded commercial brochure hosted by Uyemura flags potential represented-product overlap relevant to the modeled resale deduction; it contains no observed 2025 resale value.
    - Evidence informing base-year company-share estimates: Identifies MEC-branded treatment offerings in a Uyemura-hosted commercial document, supporting manufacturer-versus-channel attribution rather than adding reseller revenue to MEC's numerator.
45. Qnity Electronics, Inc. - 2025 Form 10-K
    - Evidence informing base-year company-share estimates: Reports 2025 Semiconductor Technologies sales of USD xx.xx and Interconnect Solutions sales of USD xx.xx.
    - Evidence informing base-year company-share estimates: Distinguishes qualifying cleaning, slurry and metallization offerings from excluded materials; supports full-year continuing-business attribution across the November 2025 separation.
    - Evidence informing base-year company-share estimates: The xx.xx% and xx.xx% chemical eligibility factors are modeled assumptions, not reported sales splits.
46. 广州三孚新材料科技股份有限公司 - 2025 年年度报告
    - Evidence informing base-year company-share estimates: Reports 2025 electronic-chemical sales of CNY xx.xx and general electroplating-chemical sales of CNY xx.xx.
    - Evidence informing base-year company-share estimates: Separately identifies equipment revenue and defines the two chemical categories as surface-engineering offerings.
47. 广东光华科技股份有限公司 - 2025 年年度报告
    - Evidence informing base-year company-share estimates: Reports consolidated 2025 PCB-chemical revenue of CNY xx.xx.
    - Evidence informing base-year company-share estimates: Defines PCB chemicals through treatment functions and separately reports excluded general reagents, battery materials, supporting trade and other activities.
48. Astena Holdings Co., Ltd. - Financial Results for the Fiscal Year Ended November 2025
    - Evidence informing base-year company-share estimates: Reports Chemicals Business sales of JPY xx.xx for the fiscal year ended November 2025.
    - Evidence informing base-year company-share estimates: Provides the financial segment anchor before the separate chemical-versus-equipment allocation.
49. Astena Integrated Report 2026 - Chapter 03, Business Strategy
    - Evidence informing base-year company-share estimates: Reports the FY November 2025 Chemicals Business composition as xx.xx% surface-treatment chemicals and xx.xx% equipment.
    - Evidence informing base-year company-share estimates: Identifies Meltex, Tokai Meltex and overseas subsidiaries within the chemical operation; the published percentage is rounded.

50. FUJIFILM Holdings Corporation - Third Quarter Ended December 31, 2025 Earnings Presentation
- Evidence informing base-year company-share estimates: The quarterly table reports Semiconductor Materials revenue of JPY xx.xx, xx.xx, xx.xx and xx.xx for the four calendar quarters of 2025.
- Evidence informing base-year company-share estimates: Their sum supplies the JPY xx.xx calendar-year business anchor; the xx.xx% treatment-chemical factor is a model assumption.

51. FUJIFILM Holdings Corporation - Semiconductor Materials Business Briefing, December 10, 2025
- Evidence informing base-year company-share estimates: Distinguishes commercial semiconductor-material families, including qualifying polishing and cleaning offerings and excluded adjacent materials.
- Evidence informing base-year company-share estimates: Supports product-scope mapping, not the assumed treatment-sales percentage.

52. Fujifilm Launches Advanced Packaging CMP Slurry
- Evidence informing base-year company-share estimates: The September xx.xx 2025 announcement identifies an advanced-packaging CMP offering and supplier-reported adoption by an unnamed device manufacturer.
- Evidence informing base-year company-share estimates: Supports in-boundary commercial participation but does not quantify launch sales or justify treating all semiconductor materials as treatment chemicals.

53. Fujifilm to Expand CMP Slurry Production Capacity in the United States
- Evidence informing base-year company-share estimates: The October xx.xx 2026 announcement schedules additional Mesa CMP facilities for operation in 2027.
- Evidence informing base-year company-share estimates: Supports excluding prospective facility activity from the 2025 numerator.

19.2. Market Concentration Analysis, 2025

[redacted] Quaker Houghton's completed Dipsol acquisition adds a chemical business, while Surface Technology UK identifies itself as a Quaker Houghton company supplying treatment services. Procurement should distinguish another brand or operating interface from another controlling organization, and should separately distinguish chemicals from outsourced finishing.

Nihon Parkerizing's consolidated notes identify Parker Corporation as an equity-method associate for the reported period. [redacted] Similarly, TANAKA PRECIOUS METAL GROUP Co., Ltd.'s operating businesses EEJA and Metalor are identifiable group chemical providers; separate operating-company quotations are not evidence of independent group control.

Technology dependence can also cross company boundaries without an acquisition. [redacted]

■■■■■■■■■■■■ Historical disclosures are insufficient to establish current exclusivity or authorization to supply.

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Hubbard-Hall's proprietary products sit alongside represented PAVCO and MetalChem offerings. A consolidated regional interface can reduce coordination burdens, but principal-specific documentation and escalation rights remain important. ■■■■■■■■ ■■■■■■■■■■ ■■■■■ ■■■■■■■ ■■■■■■■ ■■■■■■■ ■■■■ ■■■ ■■■■ ■■■■■■■■■■ ■■ ■■■■ ■■■ ■■■■■■■■■ ■■ ■■■■■■■■ ■■■■■■ ■■ ■■■ ■■■■ ■■■■■■■■■ ■■■■■■■ ■■■■■■■■■ ■■ ■■■■■■■■■■■■■ ■■■■■■■■■■■■■ ■■■ ■■■ ■■■■■■■■■■ ■■■■ ■■■ ■■ ■■■■■■■■ ■■■■ ■■■ ■■■■■■■■■ ■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■ ■ ■■■■■■■■■■■■ ■■■■■■■■■■■■

Other names require equally careful treatment. QUALICHEM, INC. is identified as a plant associated with named CHEMEON products in the DLA record; that establishes a supply-chain role, not ownership of CHEMEON. ■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■ ■■■ ■■ ■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■ ■■■ ■■ ■■■ ■■■■■■■■ ■■ ■■ ■■■ ■■■■ ■■■■■■■ ■■■■■■■ ■■■ ■■■ ■■■■■■■■ ■■■■■■ ■■■■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■ ■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■■■■ ■■ ■■■ ■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■■ ■■■■■■ ■■■■■■■ ■■■■■■ ■■■ ■■■■■■■■ ■■■■■ ■■■■■■■■■■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■ ■■■■■ ■■■■■■■■■■■■■ ■ ■■■■■ ■■■■■■ ■■■■ ■■ ■■■■■ ■■■■■ ■■ ■■■■■■■■ ■■ ■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■

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Sources & Evidence

1. XMAPP Approved Applicators Request
   · XMAPP offers application/region-specific discovery of applicators delivering parts to OEMs, not chemical-distributor appointments. ([industrial.macdermidenthone.cn](https://industrial.macdermidenthone.cn/quality-performance-systems/xmapp/xmapp-approved-applicators-request))
2. Hubbard-Hall Acquires Assets of JSA/Metalline
   · Hubbard-Hall distinguishes proprietary chemistry from represented PAVCO and MetalChem products in its regional commercial proposition. ([hubbardhall.com](https://www.hubbardhall.com/about/news/hubbard-hall-acquires-assets-jsametalline))

3. Fabricación de productos para tratamientos de superficies - CYV Industrias
   · The undated disclosure separates producer and technology-principal roles without establishing current license terms.
   ([cyvindustrias.com](https://cyvindustrias.com/fabricacion-de-productos-para-tratamientos-de-superficies/))
4. Qualified Products Database - QPL-81706: Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys
   · The DLA record distinguishes CHEMEON manufacturer and QUALICHEM plant roles for named products; it does not establish ownership.
   ([qpldocs.dla.mil](https://qpldocs.dla.mil/search/print_govt_mfg.aspx?govt=xx.xx))
5. グループ企業一覧 | 企業情報 | 田中貴金属
   · EEJA and Metalor are operating businesses within the TANAKA group, not presumptively independent group alternatives. ([tanaka.co.jp](https://www.tanaka.co.jp/company/group/))
6. Distributors - Bulk Chemicals
   · The distributor/licensee network establishes named channel relationships, not independent product ownership or account commitments. ([bulkchemicals.us](https://www.bulkchemicals.us/distributors))
7. About Us - Dynamix
   · The named distributors establish channel relationships rather than independent rights to the principal's chemistry. ([dynamix-inc.com](https://dynamix-inc.com/about-us/))
8. Empresa - ITONOR
   · The historical account does not establish operative product rights for a new purchasing commitment. ([itonorsa.com.uy](https://www.itonorsa.com.uy/empresa/))
9. Alianza - Empresa
   · The undated legacy disclosure does not establish current license scope, availability, or independence of technology rights. ([alianzats.cl](https://alianzats.cl/empresa.htm))
10. Quaker Houghton | Surface Technology UK
    · Surface Technology UK states that it is a Quaker Houghton company.
    ([surfacetechnology.co.uk](https://www.surfacetechnology.co.uk/about-us/quaker-houghton/))
11. Asterion is Now Part of DuBois Chemicals
    · DuBois records acquisition of Asterion and a subsequent customer-communication transition into DuBois.
    ([duboischemicals.com](https://www.duboischemicals.com/dubois-acquired-asterion/))
12. 第 141 期定時株主総会 その他の電子提供措置事項
    · Nihon Parkerizing's consolidated notes identify Parker Corporation as an equity-method associate for the reported period. ([parker.co.jp](https://www.parker.co.jp/ja/_pdf/topics/141Webkaiji_jp.pdf))
13. International Partners & Distributors | Columbia Chemical
    · Columbia's international listing identifies a South African Metalchem partner; it does not bridge that identity to the U.S. MetalChem reference.
    ([columbiachemical.com](https://www.columbiachemical.com/partners-and-distributors/international-partners/))
14. Nosotros - Chemtec Latin America
    · Chemtec Latin America's business description supplies one relationship account; registry-backed identity and equity reconciliation remain unresolved. ([chemtecamerica.com](https://chemtecamerica.com/nosotros/))
15. Prodotti - Qualichem
    · The Italian Qualichem catalog lists pretreatment products including Qualiphos and Chembond offerings; no U.S. ownership link is established. ([qualichem.it](https://www.qualichem.it/prodotti))
16. Quaker Chemical Corporation - Form 8-K
    · The completed acquisition places the identified Dipsol chemical business within Quaker Houghton's organization. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2511327d1_8k.htm))

RESEARCH SAMPLE REPORT

19.3. Recent Developments & Impact Analysis, 2025

Ownership consolidation and channel expansion change different parts of the buyer's choice. Quaker Houghton announced completion of the Dipsol acquisition on April xx.xx 2025, bringing an identified surface-treatment and plating business into its organization. [redacted]

[redacted] It does not establish disruption, nor does it guarantee every account obligation. Azelis's April xx.xx 2026 Canadian appointment predates that closing; a new commitment through the distributor should depend on confirmation of continuing scope and fulfillment responsibility.

The March xx.xx 2026 CHEMEON-SurTec alliance presents a different route from acquisition. CHEMEON Surface Technology, LLC contributes U.S. access and its Nevada commercial hub, while SurTec, within Freudenberg SE, contributes international infrastructure and local expertise for CHEMEON products. [redacted]

Columbia Chemical's May xx.xx 2026 announcement of collaboration with YUKEN INDUSTRY CO., LTD. and YUKEN America adds another documented U.S.-market relationship without establishing an ownership transaction. [redacted] Buyers should require an offering-specific commercial route before treating the announcement as a new source of supply; incumbent specialists are not displaced merely because a collaboration was announced.

[redacted] These developments create specific alternatives to evaluate rather than evidence of universal replacement or withdrawal of earlier products. The relevant trigger is the required offering's confirmed availability and acceptance for the destination account.

FUJIFILM's September xx.xx 2025 announcement explicitly reported adoption of its advanced-packaging CMP material by an unnamed semiconductor device manufacturer. ■■■■ ■■■■■■■ ■■■■■■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■■ ■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■ ■■■ ■■■■■■■■■■■■ ■■■■■■■■■■ ■■ ■■■■■■■ ■■■■■■ ■■■ ■■■■■■■■ ■■■ ■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■■■ ■■■■■■■■■■ ■■ ■■■■■ ■■■■■■■■■■ ■■ ■■■■■■ Procurement should separate an existing contracted supply route from dependence on the planned addition; the latter requires confirmation of operation and product-specific commercial availability before it supports a commitment.

Qnity Electronics, Inc.'s completed November xx.xx 2025 separation from DuPont similarly warrants counterparty and material-continuity checks rather than automatic substitution. ■■■ ■■■■■■ ■■■■■■■■■ ■■■■■■■■■■■■■■■■■ ■■■■■■■■■■■■■ ■■■■■■■■■■■ ■■ ■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■ ■■■ ■■■■■ ■■■■■■■■■■ ■■■ ■■■■■■■ ■■■■■■■■ ■■ ■■■■■■ ■ ■■■■■■■■■■■ ■■■■■■ ■■ ■■■■■ ■■■■■■■■■ ■■■■■■ ■■■■■■■ ■■■■■ ■■■■■■■■■■■■■ ■■■■■■■■ ■■■■ ■■■■■■■ ■■■■■■■■ ■■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■ ■■ ■ ■■■■■■■■■■■ ■■■■■■ ■■■■■■■■■■■■ ■■■ ■■■■■■■■ ■■ ■■ ■■■■■■■■ ■■■■■■■■■ ■■■ ■■■■■■■■■■ Across these events, the useful monitoring indicators are completed legal transition, effective product/channel terms, confirmed facility operation, and account-specific acceptance-not the announcement alone.

Sources & Evidence

1. Fujifilm Launches Advanced Packaging CMP Slurry
   · The adoption claim is supplier-reported and does not establish another buyer's acceptance. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))
2. Surventis launches as an independent global leader in automotive coatings and surface treatment
   · Surventis's July xx.xx 2026 launch announcement states that products, technologies, brands, and technical teams would remain unchanged. ([chemetall.com](https://www.chemetall.com/global/en/about-us/press-releases/2026/Surventis-launches-as-an-independent-global-leader))
3. Less energy, more efficiency: Henkel optimizes aluminum anodizing with new additive Bonderite M-AD 2000A
   · Henkel's August xx.xx 2025 announcement reports European availability and supplier-reported Qualanod approval, with wider introduction planned. ([next.henkel-adhesives.com](https://next.henkel-adhesives.com/us/en/our-brands/bonderite.html))
4. BASF and Carlyle complete coatings transaction
   · BASF confirms the Surventis transaction closed on June xx.xx 2026 and included surface treatment alongside coatings businesses. ([basf.com](https://www.basf.com/global/en/media/news-releases/2026/xx.xx/p-xx.xx-xx.xx))
5. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada
   · The appointment predates the Surventis closing and does not settle individual post-transition agreement terms. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
6. Hubbard-Hall Acquires Assets of JSA/Metalline
   · The December xx.xx 2025 announcement records JSA/Metalline asset acquisition and expanded Midwest customer-facing coverage. ([hubbardhall.com](https://www.hubbardhall.com/about/news/hubbard-hall-acquires-assets-jsametalline))

7. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   · Qnity's filing confirms its November xx.xx 2025 separation and describes program-specific qualification conditions.
   ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
8. Fujifilm to Expand CMP Slurry Production Capacity in the United States | Fujifilm [Switzerland]
   · FUJIFILM's October xx.xx 2026 announcement schedules additional Mesa CMP facilities to begin operations in 2027 rather than reporting completed operation.
   ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))
9. CHEMEON and SurTec Form Strategic Alliance in Global Surface Technology Market
   · The March xx.xx 2026 alliance assigns CHEMEON U.S.-access and SurTec international-access roles using local expertise and infrastructure; it is not an acquisition.
   ([surtec.com](https://www.surtec.com/en/company/news/chemeon-and-surtec-form-strategic-alliance-in-global-surface-technology-market/))
10. About SurTec
    · SurTec identifies its surface-treatment businesses and its ownership within Freudenberg Chemical Specialities and Freudenberg SE. ([surtec.com](https://www.surtec.com/en/company/about-surtec/))
11. Aisen Semiconductor to build major IC materials base in NETDA
    · The announced Nantong development is prospective rather than evidence of a newly operating facility.
    ([en.nantong.gov.cn](https://en.nantong.gov.cn/netda/2026-xx.xx/xx.xx/c_1162554.htm))
12. Umicore MDS expands its hard gold portfolio with AURUNA 8000
    · The March xx.xx 2026 announcement introduces AURUNA xx.xx and states that existing AURUNA alternatives remain available.
    ([mynewsdesk.com](https://www.mynewsdesk.com/umicore-mds/pressreleases/umicore-expands-its-hard-gold-portfolio-with-the-sustainable-high-speed-electrolyte-auruna-r-xx.xx-xx.xx))
13. Quaker Chemical Corporation - Form 8-K
    · Quaker Houghton's filing records the April xx.xx 2025 announcement of completed Dipsol acquisition and identifies Dipsol's treatment/plating business.
    ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/tm2511327d1_8k.htm))
14. Latest News & Press Releases | Columbia Chemical
    · Columbia's May xx.xx 2026 news entry records a U.S.-market collaboration with Yuken Industry and YUKEN America, not an ownership transaction.
    ([columbiachemical.com](https://www.columbiachemical.com/about-us/metal-finishing-news/))

19.4. Product Portfolio Analysis, 2025

Chemical Surface Treatment portfolios overlap at the level of a purchased function, not across an entire supplier catalog. ■■■■■■ ■■ ■ ■■■ ■■■■■■ ■■■■■■■■■ ■■■ ■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■ ■■■■■ ■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■■ ■■■■■■■■■■■■ ■■■ ■■■■■■ ■■■■■ ■■■■■■■■■■■■ ■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■■ ■■■■■ ■■■■■■ ■■■■■ ■■■■■■■■ ■■■■■ ■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■■■■■ ■■■■■ ■■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■■■■ ■■■■■■ ■■■■ ■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■ ■■■ ■■■■■■■ ■■■■■■■■■■ ■■■■■■■ ■■■ ■■■■■■■■■ ■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■■ ■■■ ■ ■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■ ■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■ ■■ ■■■■■■■■ ■■ ■ ■■■■■■■■■■■ ■■■■■■■ A consolidated proposal is useful only where it covers the buyer's actual functions and accountable supplying entities.

MKS Inc., through Atotech, and Element Solutions Inc, through MacDermid Enthone Industrial Solutions, bring industrial finishing propositions beyond pre-paint preparation. JCU

Corporation spans electronics chemicals and decorative or rust-proof finishing; C. Uyemura & Co., Ltd. identifies plating-chemical manufacture and distribution separately from machinery. ▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪

Nihon Parkerizing offers cleaning, paint-base preparation, and rust-prevention chemicals. Parker Corporation separately advertises Parkem industrial chemicals, paint removers, and steel-related products, including a KOLENE offering. ▪ ▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪

Electronics purchasing requires a more granular comparison. ▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪ ▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ A request framed simply as semiconductor chemicals would obscure the buyer's actual choice and could overstate the value of portfolio consolidation.

Japan Pure Chemical Co., Ltd. identifies noble-metal plating chemicals for electronic connection points, while Ishihara Chemical Co., Ltd. advertises electronic-component plating chemicals. ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪ Combining these purchases may simplify interfaces, but should not conceal separate material-account, chemical-supply, equipment, or recovery obligations.

▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ANC KOREA Co., Ltd. separately lists semiconductor plating additives, strippers, and etchants. These records support function-specific regional inquiries, not a conclusion that each supplier covers the same

packaging grades or that an advertised application establishes acceptance at another customer.

[illegible] These are distinct commercial routes: an alliance, a manufacturing footprint, and a group relationship contribute different forms of access. For YMT Co., Ltd. and Guangdong Guanghua Sci-Tech Co., Ltd., named-product availability and the accountable regional seller remain material unresolved distinctions in an electronics comparison; neither should be treated as absent or inferior because those conditions are unsettled.

Dr.-Ing. [illegible] Their usefulness depends on the accepted product and service scope, not on presumed parity across every application.

[illegible] Hawkins, Inc. advertises a surface-finishing supplier/distributor proposition, while Seacole lists both general-finishing and PCB chemical categories. These portfolios support multifunction sourcing inquiries, but a buyer still needs to identify which products are proprietary, represented, or supplied through a separate principal.

[illegible] Troy Chemical Industries presents a metal-pretreatment business. These offerings are candidates for requirement-specific sourcing, not evidence that a specialist can replace every chemical supplied by a broader incumbent.

Bulk Chemicals, Inc. catalogs E-CLPS, ZIRCA-SIL, TRI-CLPS, cleaners, final seals, and stripping products. Calvary Industries has an identified metal-pretreatment chemical business and manufacturing proposition. [redacted]

Removal and cleanliness portfolios require different peers. Borer Chemie AG differentiates cleaning for precision manufacturing, optics, flat-glass displays, and tool decoating. [redacted]

[redacted] Callington Haven Pty Ltd has an identified stainless-steel pickling offering, with Mehta Sanghvi & Co. separately advertising Callington-branded treatment chemicals. These records distinguish chemical supply from the purchase of treated components; a channel catalog does not establish every current appointment or local delivery obligation.

[redacted] s r.o., and Galvano-Partners publish metal-treatment, phosphating, or plating portfolios. These are useful supplier inquiries when their specific function matches the award; group ownership, equipment involvement, and chemical manufacture remain separate attributes.

[redacted]

[illegible] A prospective brand owner should compare the rights, seller responsibility, and continuity terms of a toll or private-label arrangement with buying an established branded product. Manufacturing participation does not alone confer ownership of the technology or the customer relationship.

[illegible] These are regionally relevant sourcing leads, but their disclosed categories do not settle the registered seller, product principal, cross-border permission, or delivery commitment for a particular award. They should not be pooled into one interchangeable regional supplier class.

[illegible] Proquimia's catalog includes phosphating, conversion pretreatment, aluminum treatment, stripping, and degreasing. Buyers should distinguish a finishing-chemical proposal from a general maintenance-product proposal before making a replacement decision; domestic presence alone establishes neither a delivery advantage nor customer acceptance.

Química Sigma offers pretreatment chemicals, while C & V Industrias states that it manufactures named Sigma products under license. [illegible] A regional shortlist should preserve those functional differences and establish the producer and seller rather than infer a common manufacturing model.

Historical licensing and representation are not the same as a present product commitment. ITONOR S.A. describes earlier licensed production associated with PENTRE S.A. and a historical Henkel representation. [illegible]

Middle Eastern portfolios include distinct pretreatment and channel propositions. [redacted] A local purchasing interface may be useful when the responsible seller accepts delivery, documentation, and escalation obligations; these catalogs do not establish automatic replacement of an already accepted imported product.

Turkish alternatives are not a single undifferentiated cohort. Kimfosan's phosphating proposition is connected to tube and wire-drawing customers. [redacted]

Pars Nickel describes electroplating and surface-preparation chemicals, Zarfan catalogs non-precious-metal plating solutions, and REFA Chemical Industry describes preparation, passivation, and phosphating products. Their chemical propositions must be separated from any equipment or service activities. [redacted]

African purchasing alternatives include both locally presented products and imported-brand channels. CHIMI ART lists cleaning agents and galvanizing flux in distinct supply forms. [redacted]

St Kilda Industrial Supplies advertises plating, passivation, and phosphating products. [redacted]

■■■■■■■■■■ ■■■■■■ ■■■■ ■ ■■■■■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■ ■■■■■■■■ ■■■■■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■ These propositions address different levels of the purchasing requirement; an input catalog or maintenance application should not be treated as a qualified formulated replacement without a product-specific connection to the required finishing function.

Bakou Chemical describes a surface-treatment division within a broader chemical business, while ABEPLAST has a chamber-directory connection to surface-treatment chemicals. ■■■ ■■■■■ ■■■■■■■■■■■■ ■■ ■■■■ ■■ ■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■ ■■■■■■■■ ■■■ ■■■ ■■■■■■■■■ ■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■■■■■ ■■■ ■■■■■■■■■ ■■■■■■■■ ■■■■■■ ■■■■■■■■ ■■ ■■■■■■■■■■■■■ Directory classification or a business-unit label does not settle the counterparty responsible for the proposed chemical.

Asian regional routes likewise combine manufacture, representation, and services. Surface Chemical Technology India Private Limited advertises electroplating, electroless, and pre/post-treatment chemistry; Astra Coatings Limited lists named pretreatment families and appears in Bulk Chemicals' international network. ■■■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■ ■■■■ ■■■■■■■■■■■■ ■ ■■■■■■■■ ■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■ ■■■■■■■ ■■■■■■■■■ ■■■ ■■■ ■■■■■■■■■ ■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■ ■■■■ ■■■■ ■■■■■■■■■ ■■■■■■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■■■■■■ ■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■■ ■■■■■■■■■■■ ■■■■ ■■■■ ■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■ ■■■■■■■■■■■■■■■ ■■■■■■■■■ ■■■■■ ■■■■■■■■ ■■■■■■■■ ■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■ ■■ ■■■■■ ■■■■■■■■

S.T. Rizing Co., Ltd. explicitly distinguishes chemical manufacture and sales from its phosphate-coating service. ■■■■ ■■■■■ ■■■■■■ ■■■■ ■■■■■■■■■■ ■■ ■■■■■■■■■■■■■■■■■■ ■■■■■■ ■■■■■ ■■■■ ■■■■■ ■■■■■■■■■■ ■■■■ ■■■■■■■■ ■■■■■■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■ ■■■ ■■■■ ■■■■■■■■ ■■■■■■■■■ ■■■ ■■■■■ ■■■■■■■■■ ■■■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■■■■■■■■■■■■ ■■■■■■■■■■■ ■■■ ■■■■■■■ ■■■■ ■■■■■■■ ■■■■■■■■■ ■■■■■■■■ ■■■■■■ ■■■ ■ ■■■■■■ ■■■■■■■■■■■■■ ■■ ■■■■■■■ ■■■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■ ■■■■■■ ■■■■■■■■■■ ■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■■■■ ■■■■■■■■■■ ■■■ ■■■ ■■■■■■■■■■■■ ■■■■■■■ ■■■ ■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■ ■■■■ ■■■■■■■■■ ■■■■■ ■■■■■■■■■■■ ■■■■■■ ■■■ ■■■ ■■■■■■ ■■■■■■■■ ■■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■ ■■■■■■■■■■■■

Sanko Shokai Co., Ltd. offers a represented-manufacturer surface-treatment catalog, Kanematsu Corporation describes a regional surface-treatment supply network, and Hypersonic Inc. lists MSC-branded electronic treatment chemicals. MSC's full legal manufacturer identity and the effective channel terms remain unresolved. ■■■■■ ■■■■■■■■■■■■■ ■■■ ■■■■■■■■■■ ■ ■■■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■ ■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■ ■■■■■■ ■■■■■■■ ■■■■■■ ■■■■■■■■■■■■■■■ ■■■■■■ ■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■ ■■■■ ■■ ■■■ ■■■■■■■■■■ ■■■■■■■■

Sources & Evidence

1. Industry
   - Chemetall catalogs cleaning, pickling, conversion, activation/passivation, and Oxsilan pretreatment families. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))

2. General Metal Finishing
   · Atotech advertises industrial-finishing categories and identifies sales, chemistry-production, and TechCenter roles. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/))
3. Fujifilm Launches Advanced Packaging CMP Slurry
   · FUJIFILM's September xx.xx 2025 announcement identifies an advanced-packaging CMP offering and explicitly reports adoption by an unnamed device manufacturer. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))
4. Borer Industry
   · Borer differentiates precision-manufacturing, optics, flat-glass-display cleaning, and tool-decoating products. ([borer.swiss](https://www.borer.swiss/en/industry))
5. BONDERITE® - Henkel Adhesives
   · Henkel advertises BONDERITE cleaning, conversion-treatment, light-metal treatment, sealing, and adjacent monitoring offerings. ([next.henkel-adhesives.com](https://next.henkel-adhesives.com/us/en/our-brands/bonderite.html))
6. Contact Us | Element Solutions Inc
   · Element Solutions identifies MacDermid Enthone Industrial Solutions as its surface-finishing chemicals business. ([elementsolutionsinc.com](https://www.elementsolutionsinc.com/contact-us))
7. Surface Treatment Chemicals | Surface Treatment by Nihon Parkerizing
   · Nihon Parkerizing identifies cleaning, paint-base preparation, and rust-prevention chemical functions. ([parker.co.jp](https://www.parker.co.jp/en/business/surface/index.html))
8. 产品信息 | 美格中国 MEC
   · MEC's regional catalog identifies electronic-substrate treatment, adhesion-enhancement, and etching functions. ([mec-co.cn](https://mec-co.cn/product/index.html))
9. Semiconductor Packaging Materials
   · Qnity catalogs packaging copper plating, under-bump metallization, and SOLDERON BP offerings. ([qnityelectronics.com](https://www.qnityelectronics.com/semiconductor-packaging-materials.html))
10. Plating - METALOR
    · Metalor advertises plating chemicals alongside equipment and recycling services. ([metalor.com](https://metalor.com/watch-jewellery-decorative/plating/))
11. Química Sigma: Tratamiento de Superficies
    · Química Sigma advertises development, manufacture, and commercialization of metal pretreatment chemicals. ([quimicasigma.com](https://quimicasigma.com/index.php/tratamiento-de-superficies))
12. Fabricación de productos para tratamientos de superficies - CYV Industrias
    · C & V states that it manufactures named Sigma pretreatment products under Química Sigma license. ([cyvindustrias.com](https://cyvindustrias.com/fabricacion-de-productos-para-tratamientos-de-superficies/))
13. Metal Treatment - SUGEST
    · SUGEST catalogs cleaning, phosphating, aluminum treatment, anodizing-related, passivation, and stripping offerings. ([sugest.com.sa](https://sugest.com.sa/product-categories/metal-treatment/))
14. Water Treatment, Fuel & Surface Treatment Solutions | CHIMI ART
    · CHIMI ART identifies cleaning agents and galvanizing flux in powder and solution forms. ([chimiart.com](https://www.chimiart.com/en/solutions))
15. Molten Salt Cleaning & Descaling Chemicals | Kolene
    · Kolene identifies manufactured cleaning, descaling, and paint/powder-removal chemicals. ([kolene.com](https://www.kolene.com/product/cleaning-chemicals/))
16. Chemical Business | Parker corporation
    · Parker Corporation's chemical-business portfolio identifies Parkem, paint-removal and steel-related products, and a KOLENE offering. ([parkercorp.co.jp](https://www.parkercorp.co.jp/en/chemical/))
17. PPG Industries, Inc. - 2025 Form 10-K
    · PPG's mandatory filing identifies metal pretreatments within its coatings businesses. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/ppg-xx.xx.htm))

18. Surface treatments | Nippon Paint Holdings
· Nippon Paint Holdings identifies pretreatment and functional surface-treatment activities through Nippon Paint Surf Chemicals. ([nipponpaint-holdings.com](https://www.nipponpaint-holdings.com/en/business/surf/))
19. Products - JCU Corporation
· JCU distinguishes electronics chemicals, decorative/rust-proof treatment chemicals, and equipment. ([jcu-i.com](https://www.jcu-i.com/english/products/))
20. Company Information | C. Uyemura & Co., Ltd.
· Uyemura identifies plating-chemical manufacture and distribution separately from machinery. ([uyemura.co.jp](https://www.uyemura.co.jp/en/company/outline/))
21. Products | Okuno Chemical Industries
· Okuno advertises chemicals for electronics, aluminum, plastics, anodizing, and corrosion-resistant plating. ([okuno.co.jp](https://www.okuno.co.jp/en/product/))
22. Industrial Finishing Chemistry & Equipment | Technic
· Technic catalogs pretreatment, electrolytic plating, electroless nickel, immersion finishing, and post-treatment chemistry. ([technic.com](https://www.technic.com/applications/industrial))
23. Introducing our Business Unit Surface Treatment | Kluthe
· Kluthe's surface-treatment unit markets DECORRDAL pretreatment for steel, galvanized steel, and aluminum. ([kluthe.com](https://kluthe.com/en/news/blog/introducing-our-business-unit-surface-treatment))
24. Columbia Chemical - Surface Finishing Product Overview
· Columbia Chemical catalogs preparation, decorative plating, functional plating, and corrosion-protection categories. ([columbiachemical.com](https://www.columbiachemical.com/metal-finishing-products/))
25. Metal Finishing - Manufacturing | DuBois Chemicals
· DuBois catalogs cleaners, aluminum finishing, conversion coatings, electroless nickel, plating additives, and paint pretreatment. ([duboischemicals.com](https://www.duboischemicals.com/manufacturing/industries/metal-finishing/))
26. Pickling | FUCHS Lubricantes
· FUCHS's Spain-localized catalog identifies a pickling-related inhibitor offering. ([fuchs.com](https://www.fuchs.com/es/en/industries/n-z/steel-and-aluminium/steel/pickling/))
27. JPC's Business and Electronic Components | Japan Pure Chemical
· Japan Pure Chemical identifies noble-metal plating chemicals for electronic contacts and connection points. ([netjpc.com](https://www.netjpc.com/english/ir/individual/business_and_components.html))
28. Plating Chemicals | Ishihara Chemical
· Ishihara Chemical advertises metal surface-finishing agents and plating chemicals for electronic components. ([unicon.co.jp](https://www.unicon.co.jp/english/product/plating/))
29. Company Profiles | Guangzhou Sanfu New Materials Technology
· Guangzhou Sanfu describes specialty surface-finishing chemicals for PCB and industrial applications. ([gzsanfu.com.cn](https://www.gzsanfu.com.cn/en/about.html))
30. Precious Metal Compounds & Coatings for Electroplating
· Heraeus markets precious-metal compounds and solutions for electroplating companies and electrolyte manufacturers. ([heraeus-precious-metals.com](https://www.heraeus-precious-metals.com/en/products-solutions/category/precious-metal-compounds-homogeneous-catalysts/salts-solutions-electroplating/))
31. グループ企業一覧 | 企業情報 | 田中貴金属
· TANAKA's group listing identifies EEJA and Metalor within its controlled operating structure and attributes plating-solution activities to them. ([tanaka.co.jp](https://www.tanaka.co.jp/company/group/))
32. BCI Technologies | Bulk Chemicals
· Bulk Chemicals catalogs pretreatments, cleaners, final seals, rust-prevention, and stripping products. ([bulkchemicals.us](https://www.bulkchemicals.us/products))

33. Distributors - Bulk Chemicals
    - BCI's listing corroborates Astra Coatings Limited's international-network connection. ([bulkchemicals.us](https://www.bulkchemicals.us/distributors))
34. Haviland USA | Surface Finishing
    - Haviland catalogs preparation, plating, aluminum finishing, and post-treatment chemistry with documentation and regional logistics support. ([havilandusa.com](https://www.havilandusa.com/products/surface-finishing))
35. About EPi | Electrochemical Products
    - EPi advertises plating, cleaning, passivation, blackening, and related surface-preparation offerings. ([epi.com](https://www.epi.com/about))
36. About Birchwood Technologies
    - Birchwood Technologies identifies preparation, cleaning, finishing, and rust-prevention products under Birchwood Laboratories LLC. ([birchwoodtechnologies.com](https://www.birchwoodtechnologies.com/news/about/))
37. Medical Implant Device Chemicals | RBP Chemical Technology
    - RBP advertises cleaning and passivation chemistry for medical-device manufacturing, not device authorization. ([rbpchemical.com](https://rbpchemical.com/medical-implant-devices/))
38. About Us - Syncoat
    - Syncoat describes a Canadian business manufacturing metal-finishing products and coatings. ([syncoat.com](https://syncoat.com/about-us/))
39. Productos | Quimetal
    - Quimetal's catalog advertises industrial degreasing and related finishing products. ([quimetal.com.mx](https://www.quimetal.com.mx/products))
40. Planta Químicos | EP Insumos
    - Electrochemical Plating identifies a Mexican chemical operation with proprietary and distributed plating, conversion, cleaning, and stripping categories. ([epinsumos.com](https://epinsumos.com/planta-quimicos.php?lang=en))
41. Magnesium Pretreatment Painting | Sanchem
    - Sanchem markets SafeGard magnesium pretreatment and final-seal products. ([sanchem.com](https://www.sanchem.com/magnesium-pretreatment-painting.html))
42. Surface Finishing Products Supplier & Distributor - Hawkins
    - Hawkins identifies a surface-finishing supplier/distributor offering with plating, conversion, and anodizing-related products. ([hawkinsinc.com](https://www.hawkinsinc.com/groups/surface-finishing/))
43. Steelcote - Circle-Prosco
    - Circle-Prosco advertises Steelcote zirconium pretreatment chemistry. ([circleprosco.com](https://circleprosco.com/zirconium-pretreatment/))
44. Markets Served - Seacole
    - Seacole advertises general-finishing and PCB-related chemical categories. ([seacole.com](https://seacole.com/markets-served/))
45. Our Journey with Troy Chemical
    - Troy Chemical's business announcement identifies its metal-pretreatment activity. ([troychemical.com](https://www.troychemical.com/our-journey-with-troy-chemical/))
46. Company History - Surface Technology
    - Surface Technology identifies its One-Plate chemical business separately from coating-service activity. ([surfacetechnology.com](https://surfacetechnology.com/about-sti/company-history/))
47. About Us - Luster-On Products
    - Luster-On describes manufacture of preparation and metal-finishing chemistry. ([luster-on.com](https://luster-on.com/about/))

48. Químicos para Ayudas de Proceso | ADHITEC
    · ADHITEC advertises a plastic-surface modifier for adhesion and painting-related preparation. ([adhitec.mx](https://adhitec.mx/quimicos-de-proceso/))
49. Sobre a BIG CROMO
    · BIG CROMO describes Brazilian manufacture and supply of pretreatment and electroplating chemicals. ([bigcromo.com.br](https://www.bigcromo.com.br/empresa))
50. Catálogo de Produtos Químicos - Galvanoplastia | Podium Química
    · Podium's commercial catalog lists named plating products. ([podiumquimica.com.br](https://www.podiumquimica.com.br/produtos))
51. A Klintex
    · Klintex identifies pretreatment manufacture and the Nanotex ZR product family. ([klintex.com.br](https://klintex.com.br/a-klintex/))
52. Tratamento de Superfícies Metálicas | Quimatic
    · Quimatic advertises metal cleaning, rust-removal, and surface-preparation products. ([quimatic.com.br](https://www.quimatic.com.br/solucoes/tratamentos-de-superficies/))
53. Productos para tratamiento de superficies metálicas - Proquimia
    · Proquimia catalogs phosphating, conversion, aluminum treatment, stripping, and degreasing products. ([proquimia.com](https://www.proquimia.com/tratamiento-superficies-metalicas/))
54. Químicos para Galvanizado - Dosakin
    · Dosakin catalogs preparation, pickling, and passivation-related chemicals for galvanized surfaces. ([dosakin.com](https://dosakin.com/galvanizado/))
55. Tratamiento de superficies metálicas - Fosfamet
    · Fosfamet catalogs conversion, phosphating, aluminum-treatment, and passivation product families. ([fosfamet.cl](https://fosfamet.cl/tratamiento-de-superficies-metalicas/))
56. Productos | Arazul
    · Arazul catalogs aluminum anodizing, pre-paint, pickling, phosphating, passivation, and paint-removal categories. ([arazul.com](https://www.arazul.com/productos.html))
57. Empresa - ITONOR
    · ITONOR describes historical licensed production associated with PENTRE and earlier Henkel representation. ([itonorsa.com.uy](https://www.itonorsa.com.uy/empresa/))
58. Catálogo de productos químicos industriales | VF Chemical
    · VF Chemical's catalog advertises a desoxidizing and phosphating product. ([vfchemical.com.ve](https://www.vfchemical.com.ve/productos/))
59. Tratamiento Metalúrgico para Preparación de Metales | Ecochemic
    · Ecochemic advertises pre-paint phosphating and rust-removal preparation for metal surfaces. ([ecochemic.net](https://ecochemic.net/productos-tratamiento-metalurgico))
60. Productos para Galvanoplastia | Central Química Argentina
    · Central Química Argentina catalogs plating additives, passivation, degreasing, and stripping products. ([centralquimica.com.ar](https://www.centralquimica.com.ar/productos-productos-para-galvanoplastia.php))
61. Productos - Ecotomer
    · Ecotomer's catalog includes a phosphating preparation product. ([ecotomer.com.ar](https://ecotomer.com.ar/productos/))
62. Productos y servicios para galvanoplastía | HTS
    · HTS identifies a business supplying electroplating products and services. ([htssrl.com.ar](https://htssrl.com.ar/quienes-somos/))
63. Alianza - Empresa
    · Alianza's legacy page describes surface-treatment chemicals and Chemetall/SurTec technology licenses. ([alianzats.cl](https://alianzats.cl/empresa.htm))

64. The Schlötter Company
    - Schlötter describes proprietary industrial/electronics finishing chemistry alongside equipment. ([schloetter.de](https://schloetter.de/en/company/))
65. Passivierungen | Dr. Hesse
    - Dr. Hesse catalogs named HESSOPAS passivation products. ([drhessetech.de](https://www.drhessetech.de/passivations))
66. Über uns - KIESOW
    - KIESOW describes degreasing, electroplating, passivation, and phosphating product activities. ([kiesow.org](https://www.kiesow.org/ueber-uns))
67. About us - Alufinish
    - Alufinish describes development, manufacture, and distribution of metal surface-treatment products. ([alufinish.de](https://alufinish.de/en/about/))
68. About Us - PMD Chemicals
    - PMD describes process chemistry for metal finishing, printed circuit boards, and electronics. ([pmdchemicals.co.uk](https://pmdchemicals.co.uk/about-us/))
69. Produits & matériels - Chimimeca
    - Chimimeca advertises formulated pickling and passivation chemicals for stainless steel and other metals. ([chimimeca.com](https://www.chimimeca.com/produits-materiels/))
70. Chemical Paint Removers for Metal | ALIT
    - ALIT markets METALSTRIP paint-removal chemicals separately from associated machinery. ([alit-tech.com](https://alit-tech.com/paint-strippers/))
71. Condoroil Chemical Srl - La chimica sostenibile per l'industria
    - Condoroil Chemical describes manufacture of surface-treatment chemicals. ([condoroilchemical.com](https://www.condoroilchemical.com/IT/company.php))
72. Chemicals for washing plants - Dollmar Meccanica
    - Dollmar Meccanica attributes development and production of relevant detergents to Dollmar S.p.A. ([dollmarmeccanica.com](https://dollmarmeccanica.com/cms/en/prodotti-e-servizi/))
73. About Candor
    - Candor identifies Lotorp as owner and describes manufacture and supply of surface-treatment and electronics chemicals. ([candorsweden.com](https://candorsweden.com/about-candor/))
74. Tratamiento Metal y Aluminio - Cromogenia Units
    - Cromogenia publishes a dedicated metal and aluminum treatment portfolio. ([cromogenia.com](https://www.cromogenia.com/categoria-producto/lubricantes-y-tratamiento-superficies/tratamiento-metal-y-aluminio/))
75. Přípravky pro fosfátování - Pragochema
    - Pragochema advertises named phosphating products. ([pragochema.cz](https://www.pragochema.cz/cs/produkty/pripravky-pro-fosfatovani/))
76. Galwanotechnika - Galvano-Partners
    - Galvano-Partners catalogs anticorrosion, decorative plating, electroless nickel, plastics metallization, and preparation chemistry. ([galvanopartners.pl](https://www.galvanopartners.pl/oferta/galvano-partners-chemicals/galwanotechnika/))
77. Каталог | ХимНикель
    - KhimNikel publishes an electroplating-reagent commercial catalog. ([chemnikel.ru](https://chemnikel.ru/catalog/))
78. НПП «СЭМ.М» - разработка химии для гальванических покрытий
    - NPP SEM.M describes an electroplating-chemistry development business. ([bestgalvanik.ru](https://bestgalvanik.ru/o-nas))
79. О компании - Химкрофф
    - Khimkroff describes chemical-material supply within its electroplating business. ([ximkroff.ru](https://ximkroff.ru/onas.html))

80. About us - AD International
    · AD International describes surface-treatment chemistry and toll-manufacturing services. ([adinternationalbv.com](https://www.adinternationalbv.com/about-ad/))
81. Surface treatment and cleaning of Mavom Chemicals
    · Mavom distinguishes developed metal-pretreatment/cleaning products from toll and private-label manufacture. ([mavom.com](https://www.mavom.com/mavom-chemicals))
82. Metal treatment products - Vecom Group
    · Vecom publishes commercial metal-treatment products. ([vecom-group.com](https://www.vecom-group.com/en/products/metal-treatment-products/))
83. History | Poligrat Deutschland
    · Poligrat describes the KSO acquisition relationship and its polishing/surface-treatment business context. ([poligrat.de](https://poligrat.de/en/company/history/))
84. Produits pour l'inox - Chimiderouil
    · Chimiderouil catalogs stainless-steel pickling and passivation products. ([chimiderouil.com](https://www.chimiderouil.com/inox/))
85. Produits - Saphonyx
    · Saphonyx's catalog includes metal pretreatment alongside other products and equipment. ([saphonyx.com](https://www.saphonyx.com/c-produits/))
86. Corozin
    · Corozin describes manufacture of phosphating and metal-treatment solutions. ([corozin.ro](https://www.corozin.ro/ro/servicii/xx.xx))
87. Produse de fosfatare | Blautech Industrial
    · Blautech catalogs phosphating, conversion, and passivation-related products. ([blautech.ro](https://blautech.ro/produs/produse-de-fosfatare/))
88. Produse și servicii - Top Chem
    · Top Chem catalogs preparation, stripping, phosphating, passivation, and related treatment offerings. ([topchem.ro](https://topchem.ro/servicii/))
89. Про компанію | Экол
    · Ekol describes plating-additive manufacture and advertises plating, passivation, and phosphating families. (ecol.co.ua)
90. Metal Surface treatment - Covalent
    · Covalent catalogs VALO preparation, anodizing-related, coloring, sealing, and conversion-treatment families. ([covalentme.com](https://covalentme.com/metal-surface-treatment-product))
91. Metal Treatment Chemicals - Diamond Jewel
    · Diamond Jewel describes Saudi sales and support for Covalent metal-treatment chemicals. ([dijew.com](https://dijew.com/our-products/metal-treatment-chemicals/))
92. Metal Treatment | Muscat and Barka Business Trading
    · Muscat and Barka Business Trading advertises metal-treatment products through its Oman business. ([muscatchemical.com](https://muscatchemical.com/node/xx.xx))
93. Surface Finishing - Petrus Chemicals
    · Petrus catalogs anodizing additives, dyes, and sealing products through an Israeli commercial contact. ([petrus-chemicals.co.il](https://www.petrus-chemicals.co.il/products/surface-finishing/))
94. Kurumsal - Hakkımızda | Kimfosan
    · Kimfosan connects its phosphating-chemical business to tube and wire-drawing industries. ([kimfosan.com.tr](https://www.kimfosan.com.tr/kurumsal/))
95. Hakkımızda - TNH Kimya
    · TNH Kimya describes conversion-treatment and passivation offerings. ([tnhkimya.com](https://tnhkimya.com/tr/hakkimizda/))

96. Hakkımızda - Odya Kimya
    - Odya describes manufacture of metal pretreatment chemicals. ([odyakimya.com](https://odyakimya.com/hakkimizda/))
97. Hakkımızda - VarTek Kimya
    - VarTek presents a metal-surface-processing chemical-supplier description without establishing product-specific award obligations. ([vartekkimya.com](https://vartekkimya.com/hakkimizda/))
98. Hakkımızda - GMD Chemicals
    - GMD describes surface-treatment chemicals within a broader fluids and coatings portfolio. ([gmdchemicals.com](https://gmdchemicals.com/hakkimizda/))
99. Hakkımızda | Damla Chemical
    - Damla describes manufacture and sale of metal and aluminum surface-treatment chemicals. ([damlachemical.com](https://www.damlachemical.com/Hakkimizda))
100. Kaplama kimyasalları - Osmanoğulları Kimya
    - Osmanoğulları describes coating-related raw-material and semi-finished-chemical supply, not a fully resolved formulated-product perimeter. ([osmanogullarikimya.com](https://www.osmanogullarikimya.com/hizmet/kaplama-kimyasallar%C4%B1.html))
101. Corporate - Blume Metal Kimya
    - Blume describes represented industrial-finishing products and chemical-production activity within its business. ([blumemks.com](https://www.blumemks.com/en/corporate/))
102. About Us - Vatan Kimya Metal
    - Vatan describes chemical-product supply for metal-plating customers. ([vatankimya.com.tr](https://www.vatankimya.com.tr/en/hakkimizda))
103. □□ □□□□□□ - □□□□ □□□□
    - Pars Nickel describes electroplating and surface-preparation chemical manufacture. ([parsnickel.com](https://parsnickel.com/about))
104. Non-precious metal electroplating solutions - Zarfan
    - Zarfan maintains a commercial non-precious-metal electroplating-solutions category. ([zarfan.com](https://www.zarfan.com/en/product-category/non-precious-metal-electroplating-solutions/))
105. About Us | REFA Chemical Industry
    - REFA describes preparation, passivation, and phosphating chemicals separately from broader activities. ([refachemical.com](https://refachemical.com/about-us/))
106. S-Weld Clean - Callington
    - Callington's Indian catalog identifies a stainless-steel pickling product and regional commercial contacts. ([callington.in](https://www.callington.in/s-weld-clean-xx.xx))
107. Electro Plating and Phosphating - St Kilda Industrial Supplies
    - St Kilda advertises electroplating, passivation, and phosphating products through its Cape Town business. ([stkilda.co.za](https://www.stkilda.co.za/electro-plating-and-phosphating/))
108. Surface Treatment | Chemtech
    - Chemtech's Egyptian portfolio markets Chemetall Gardobond, Gardoclean, Gardolene, and Oxsilan products. ([chemtech-egypt.com](https://www.chemtech-egypt.com/st))
109. Fusion for specific chemicals
    - Fusion's company announcement describes plating and pretreatment chemicals and an agency proposition. ([fusion-eg.net](https://www.fusion-eg.net/en/blog/fusion-for-specific-chemicals))
110. □□□□□□□□□ □□□□□□ □□□□□□□□ - HelwanChem
    - HelwanChem catalogs aluminum-treatment, coloring, and degreasing categories. ([helwanchem.com.eg](https://www.helwanchem.com.eg/%D9%xx.xx%D9%8A%D9%xx.xx%D8%A7%D9%xx.xx%D9%8A%D8%A7%D8%AA-%D9%xx.xx%D8%B9%D8%A7%D9%xx.xx%D8%AC%D8%A9-%D8%A7%D9%xx.xx%D8%A3%D9%xx.xx%D9%xx.xx%D9%xx.xx%D9%xx.xx%D9%8A%D9%xx.xx%D9%xx.xx/))

111. Chimie Tous Supports | PCM
· PCM's Moroccan catalog contains cleaning, phosphating, and conversion-treatment categories. ([pcm-maroc.com](https://pcm-maroc.com/gammes/chimique-tous-supports))

112. Secteurs d'activité - Traitement de surface | CADILHAC
· CADILHAC markets chemical inputs to surface-treatment businesses. ([cadilhac.ma](https://cadilhac.ma/secteurs/traitement-de-surface))

113. Production et Fabrication - Bakou Chemical
· Bakou Chemical identifies a surface-treatment division within a broader chemical business. ([bakou-chemical.com](https://www.bakou-chemical.com/production-et-fabrication/))

114. Produits chimiques pour traitement de surface - El Mouchir
· The Algerian chamber directory connects ABEPLAST with surface-treatment chemicals; it does not settle the named-product or seller role. ([elmouchir.caci.dz](https://elmouchir.caci.dz/produit/xx.xx))

115. Industrial Cleaning Chemicals Supplier in Nigeria
· Epoxy Oilserv advertises industrial cleaning products in Nigeria. ([epoxyoil.com](https://epoxyoil.com/cleaning-chemicals-supplier/))

116. Phosphating | Selleys Trading
· Selleys Trading describes imported Chemetall phosphating and activating products. ([selleystrading.com](https://www.selleystrading.com/phosphating))

117. Metal Treatment Chemicals Suppliers in Kenya
· Sparks Chemicals advertises metal-treatment inputs through an East African distribution proposition. ([sparkschemicals.com](https://sparkschemicals.com/categories/metal-treatment-chemicals))

118. Metal Treatment Chemicals Supplier Kenya | Kivi
· Kivi advertises metal-treatment inputs through its Kenyan supplier business. ([kivichemicals.com](https://kivichemicals.com/categories/metal-treatment-chemicals))

119. Metal Cleaning & Surface Preparation | Kiki's Industrial Chemicals
· Kiki's advertises raw-material and specialty-input supply for metal cleaning and preparation. ([kikisindustrialchemicals.com](https://kikisindustrialchemicals.com/applications/metal-cleaning))

120. Metal Cleaning Chemicals - Zenco Systems
· Zenco advertises commodity metal-cleaning inputs through its regional supplier page. ([zenithcoltd.com](https://zenithcoltd.com/product/metal-cleaning-chemicals-kenya/))

121. Industrial Chemicals - Vanaden
· Vanaden advertises rust-removal, surface-preparation, and metal-protection categories. ([vanaden.co.tz](https://vanaden.co.tz/industrial-chemicals/))

122. Products | Senchemical
· Senchemical lists industrial inputs including a rust-inhibition application. ([senchem.sn](https://senchem.sn/fr/our-products/))

123. Astena Group | Meltex
· Meltex identifies Astena Holdings as the holding company and Meltex within the group's chemicals business. ([meltex.com](https://www.meltex.com/english/company/group_company.html))

124. Company Profile | Meltex
· Meltex describes electronics and plating-chemical manufacture/sales and identifies Japan, East Asia, and Southeast Asia as sales regions. ([meltex.com](https://www.meltex.com/english/company/outline.html))

125. 关于我们 | 武汉风帆电化科技股份有限公司
· Wuhan Fengfan describes surface-treatment additives and a strategic alliance with Schlötter, not an ownership transaction. ([fengfan.net](https://www.fengfan.net/index.php?a=index&c=Lists&m=home&tid=xx.xx))

126. About Us - INOFINE
· INOFINE states that it became part of Aisen Semiconductor Materials Group and identifies regional distribution and expansion activities. ([inofine.com](https://inofine.com/about-us/))

127. Aisen Semiconductor to build major IC materials base in NETDA
    - The February xx.xx 2026 government announcement identifies Aisen's electroplating-materials business and a planned Nantong project. ([en.nantong.gov.cn](https://en.nantong.gov.cn/netda/2026-xx.xx/xx.xx/c_1162554.htm))
128. Qingfeng Enterprises Co. LTD
    - Qingfeng describes metal-pretreatment chemicals and regional factory establishments, including Vietnam. ([en.ching-feng.com](https://en.ching-feng.com/p/about.html))
129. Semiconductor - ANC KOREA
    - ANC KOREA catalogs semiconductor plating additives, strippers, and etchants. ([anckorea.kr](https://anckorea.kr/en/products/semiconductor.html))
130. IC Packaging - MSC | Hypersonic
    - Hypersonic catalogs MSC-branded electronic surface-treatment chemicals without resolving MSC's full legal manufacturer identity. ([hpc.com.tw](https://www.hpc.com.tw/Product_content.aspx?entry=xx.xx))
131. Surface Treatment Chemicals | Sanko Shokai
    - Sanko Shokai catalogs surface-treatment chemicals attributed to represented manufacturers. ([sanko-inc.com](https://sanko-inc.com/en/surface-treatment/))
132. Surface Treatment Chemicals Business | Kanematsu
    - Kanematsu describes surface-treatment supply and an Asian sales network. ([kanematsu.co.jp](https://www.kanematsu.co.jp/en/business/electronics_devices/components_material/surface_treatment_chemicals))
133. Surface Chemical Technology India Private Limited
    - The official catalog advertises electroplating, electroless, and pre/post-treatment chemicals through the identified Indian business. (surfacechemical.in)
134. Astra Coatings Limited - Sustainable Pre-treatment Chemicals
    - Astra's catalog identifies named pretreatment product families and its Indian commercial proposition. ([astrachemicals.com](https://www.astrachemicals.com/))
135. Electroplating Materials | Suyog
    - Suyog Metalix advertises electroplating materials without establishing a complete proprietary treatment-system portfolio. ([suyogmetalix.com](https://suyogmetalix.com/electroplating-materials.html))
136. Holsen Interchem - Company and Product Catalog
    - Holsen Interchem catalogs named plating products and preparation/post-treatment categories. ([holseninterchem.com](https://www.holseninterchem.com/index.php))
137. History - Auromex
    - Auromex describes surface-finishing chemical manufacture and historical regional establishments. ([auromex.com](https://www.auromex.com/history/))
138. Epunion International Enterprise
    - Epunion catalogs phosphating, passivation, and plating-additive families. ([epunion.com](https://www.epunion.com/))
139. Metal Surface Treatment Chemicals & Phosphate Coating Service Thailand
    - S.T. Rizing explicitly distinguishes chemical manufacture/sales from its additional phosphate-coating service. ([strizing.com](https://www.strizing.com/xx.xx/english))
140. Thai Kelly Corp.
    - Thai Kelly identifies an import/distribution business focused on electroplating and surface-treatment chemicals. ([thaikelly.co.th](https://www.thaikelly.co.th/))
141. Surface Treatment Chemicals - Fuji Kasei Thailand
    - Fuji Kasei Thailand catalogs plating, conversion-treatment, brightening, and polishing chemical categories. ([fujikasei.co.th](https://fujikasei.co.th/chemical/surface-treatment-chemicals/))
142. About SCMA | Sinar Cemaramas Abadi
    - PT. Sinar Cemaramas Abadi describes Indonesian electroplating-chemical production. ([sinarcemaramasabadi.co.id](https://sinarcemaramasabadi.co.id/about-scma))

143. About Us - Surfatech-Trimega Inti Selaras
· Trimega describes chemical supply and a Mihara relationship, distinct from its equipment/service activities. ([surfatech-tis.com](https://www.surfatech-tis.com/index.php/about-us))
144. Supplier Chemical Metal Treatment Jakarta | PT Crystal Clear Chemicals
· Crystal Clear Chemicals identifies a metal-pretreatment chemical-trading proposition in Jakarta. ([spesialiskimia.com](https://www.spesialiskimia.com/))
145. Eternal Gloria Industrial - Advanced Surface Finishing Solutions
· Eternal Gloria advertises surface-finishing solutions; the disclosed proposition does not fully separate manufacture, resale, and services. ([eternalgloria.com](https://www.eternalgloria.com/))
146. Electronics | Growel
· Growel's electronics portfolio identifies electronic-plating and PCB chemical manufacture and names Grauer & Weil (India) Limited. ([growel.com](https://growel.com/page/electronics))
147. METALNOX Products at ATRA Powertrain Expo | KYZEN
· KYZEN's METALNOX announcement identifies an industrial metal-parts cleaning offering. ([kyzen.com](https://kyzen.com/news/metalnox-chemistries-to-be-kyzen-focus-at-atra-powertrain-expo/))
148. Welding & Metal Treatment Products | Mehta Sanghvi
· Mehta Sanghvi's catalog advertises Callington-branded pickling and passivation products. ([mehtasanghvi.com](https://mehtasanghvi.com/welding-metal-treatment-products))
149. Finishing Chemicals | voestalpine Böhler Welding
· Böhler Welding advertises Avesta pickling, cleaning, and passivation products for stainless steel and special alloys.
([voestalpine.com](https://www.voestalpine.com/welding/us-en/products/consumables/finishing-chemicals/))
150. Surface Treatment - Blue Chip Enterprises
· Blue Chip advertises named surface-preparation and protection products through its Pakistani commercial contacts. ([bluechipenterprises.com](https://bluechipenterprises.com/surface-tratment/))
151. Umicore MDS expands its hard gold portfolio with AURUNA 8000
· Umicore's company-authored announcement identifies its electroplating business and AURUNA electrolyte offerings.
([mynewsdesk.com](https://www.mynewsdesk.com/umicore-mds/pressreleases/umicore-expands-its-hard-gold-portfolio-with-the-sustainable-high-speed-electrolyte-auruna-r-xx.xx-xx.xx))
152. Mason Wells Acquires Calvary Industries
· Mason Wells identifies Calvary's metal-pretreatment chemical business and manufacturing proposition in its acquisition announcement.
([masonwells.com](https://www.masonwells.com/mason-wells-acquires-calvary-industries/))
153. Catálogo químicos | BYCSA
· BYCSA's catalog advertises surface-preparation and plating-related chemicals. ([bycsa.co](https://bycsa.co/wp-content/uploads/2024/xx.xx/Catalogo-quimicos-v1.pdf))
154. Plating Technologies | PAVCO
· PAVCO's manufacturer catalog advertises named plating technologies. ([pavco.com](https://pavco.com/product/plating-technologies))

19.5. Benchmarking Analysis, 2025

The defensible benchmark is an accepted chemical, an accountable seller, and a support commitment for the same application and destination. Product qualification and customer-controlled processor acceptance are separate conditions. ■■■ ■■■■■■■■■■ ■■■■■■ ■■■■■■■■ ■■■■■■■■■ ■■■ ■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■■■■■ ■■■■■■■ ■■■■■■ ■■■■■■■ ■■■■■ ■■■■■■■■■■ ■■■■■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■■■ ■■■ ■■■■■■■ ■■■■■ ■ ■■■■■■■■■ ■■■■■■■■ ■■ ■■■■■■■■■■■■■■■■ ■■■■■■■ ■■■■■■■■■ ■■■■■■■ ■■ ■■■■■ ■■ ■ ■■■■■■■ ■■■■■■■■■■■■■■■

[illegible] A regional organization supports a credible service inquiry, while the Borer counterexample demonstrates why a worldwide catalog cannot establish destination-specific availability. Buyers should identify the local service owner, documentation responsibility, escalation path, and any equipment-support implications before consolidating purchases.

Channels also require separate peer groups. Azelis's named Canadian Chemetall appointment, Silmid's advertised SOCOMORE catalog, Insulectro's listed Qnity metallization products, and Gallade Chemical, Inc.'s MacDermid Enthone offering establish different product and territory interfaces. [illegible] Kolene Corporation offers both chemicals and selected Detroit processing services. Buying treated parts changes logistics, turnaround, and acceptance obligations and is not a like-for-like chemical award.

[illegible] An upstream or component offering is not inferior because it does not provide a complete finishing package, but it cannot demonstrate replacement of one. The same discipline applies to DÖRKEN Coatings' DELTA-PROZINC electroplating range versus its separately described zinc-flake systems and NOF Corporation's GEOMET anti-corrosion treatment: a shared corrosion objective does not establish a common purchase or interchangeable approval.

[illegible] These propositions require product-principal attribution rather than an assumption that every catalog item is owned by the commercial seller. Their

appropriate benchmark is the responsibility accepted for the proposed product and account, not a corporate-wide capability score.

Some sourcing comparisons remain incomplete at the offering-to-seller boundary. For Madison Chemical Co., Inc., Aqua Bond Inc., A Brite Company, KCI Chemical Company, and Hydrite, the precise current chemical and accountable seller needed for the proposed industrial-finishing comparison require confirmation. ■■■ ■■■■ ■■■■■■■■■ ■■■■■ ■■■■■■■■■■■ ■■■ ■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■ ■ ■■■■■ ■■■■■■■■■■■■■■■■ ■■■■■■■■ ■■■ ■■■ ■■■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■ ■■■■■■ ■■ ■■■■■■■■■■■■■■■■■ ■■■■■ ■■■ ■■ ■■■■■■■■■■ ■■■■■■ ■■■■■■■■ ■■■ ■■■ ■■■■■■■ ■■■■■■■ ■■■■■■■■ ■■■■■■■ ■ ■■■■■■■■■■■■■■■ ■■■■■■■■■■ ■■ ■■■ ■■■■■■■■ ■■■■■■■■ ■■■■ ■■ ■■■■■ ■■■ ■■■■■■■■■■■■ ■■■■■■■■ ■■ ■■■■■ ■■■■■ ■■■■■■■■■■ ■■■■■■■■ ■■ ■■■■■■■■ ■■■■ ■■■ ■■■■■■■■ ■■■ ■■■■■■■■■■■■ ■■ ■■■ ■■■■■■■■■ ■■■■■■■■■■■ ■■■■■■■■■■■■■■■ ■■ ■ ■■■■■■■■■■■■■■■■■ ■■■■■■■■■ A buyer should not place these propositions into the same replacement shortlist until that distinction is established. The necessary commercial evidence is a product-specific catalog or quotation tied to the legal seller, not a general chemical-company description.

■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■ ■■■■■■■■■ ■■■ ■■■■■■■ ■■■■■■■■ ■■■ ■■ ■■■■■■■ ■■■■■■ ■■■■■■■■■ ■ ■■■■■■■■ ■■ ■■■■■■■■ ■■■■■■■■ ■■■■■■ ■■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■ ■■■■■■ ■■■■■■■■■■ ■■■■■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■ ■■■■■■■ ■■ ■■■■■■■■■ ■■■■■■■■ ■■■■■■■■ ■■■■■■ ■■■■■■ ■■■■■■■■■■ ■■■■■■■ ■■■■■■■■■ ■■■ ■■■■■■■ ■■■■■ ■■■ ■■■■■ ■■■■■■■ ■■■■ In these comparisons, named-product attribution and the boundary between treatment chemistry, general maintenance products, and represented inputs are not settled. A purchasing commitment should depend on that attribution rather than an assumed domestic-manufacturing or independent-technology advantage.

For Plazma K, NPP Ekomet, METURGEN, Bochemie a.s., Brüno Metal, and DEWE Brünofix GmbH, the current chemical offering, legal seller, and effective commercial rights remain unresolved. The unanswered question for Pioneer Metal Finishing, Dro Pur S.A., Axis Industrial, Allenchrome Electroplating Ltd, and Galvamed is different: whether the contemplated award concerns independently sold chemicals or the delivery of treatment services. ■■■■■ ■■■■■■■■■■■■ ■■■■■■ ■■■ ■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■ ■■■■■■ ■■■■ ■■ ■■■ ■■■■■■■■ ■■ ■■■■■■■■■■■■■■■■■■ ■■■■■■■■■■■■

For Al Taher Chemicals Trading LLC, RIO Middle East, pipelineqatar.com, and Krome Metal Chemicals (Pty) Ltd, current product-specific seller or appointment terms remain material to an award. ■■■ ■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■■■■ ■■ ■■■ ■■■■■ ■■■■■■■■■■■ ■■■■■■ ■■■■■■■■■■■■■■■■ ■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■ ■■■■ ■■■■■■■■■■■■ ■■■■■■■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■ ■■■■■ ■■ ■■■ ■■■■■■■■■ ■ ■■■■■■■■ ■■■■■■■■■■■■■■■■ ■■■■■■■■■■■■ Afra Tajhiz Shimi and Pouyab Felez require clearer product and legal-counterparty attribution before comparison with the identified preparation and plating suppliers.

For Met Kimya, Mesalp Kimyevi Ürünler, Yıldızlar Kimya Yüzey İşlem Teknolojileri A.Ş., Atılım Kimya Sanayi ve Ticaret A.Ş., Galvano Mondo, PETROFER, Axis Group, Optiva Endüstri, Net Kimya, Noga Chemical Kimyasal Dış Tic. A.Ş., Galvabor Galvanoteknik Makina ve Kimya San. ▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪ ▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪ ▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪

Entek Group of Companies, Chemplus, Albarr Services, GSI Chemicals International, Cogemat Tunisie, GOKEM International Chemical Company Limited, and GTZ (India) Pvt. ▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪ ▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ Until those records are available, a multinational's regional office is not a substitute for understanding these participants, and their unresolved roles should not be treated as evidence of limited competitive significance.

Electronics comparisons involving Wuhan Aobang Biaomian Jishu Youxian Gongsi, Incheon Chemical Co., Ltd., ShinPoong Metal, Nanmat Technology Co., Ltd., and Nippon Surface Chemical still require a named offering and an exact operating-company bridge. ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ No unrelated international affiliation is inferred for ZF Corporation.

▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ CIPL Pty (2021) Ltd has a Quik metal-treatment catalog, but the legal-name, brand, and treatment-versus-maintenance boundaries still require product-specific confirmation. Across these unresolved cases, the appropriate action is to condition the shortlist on the missing commercial fact, not to presume absence, equivalence, or independent control.

These limitations prevent a fully resolved roster-wide equivalence assessment. ▪▪▪▪ ▪▪ ▪▪▪ ▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪ ▪ ▪▪▪▪▪▪▪▪ ▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ An award-specific offering and accountable supplier relationship are required before using those objectives to differentiate competitors.

Sources & Evidence

1. General Metal Finishing
   · Atotech's location listings distinguish sales, production, and support roles relevant to service benchmarking. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/))
2. Terms and Conditions: Q020 - D1-4426 Approved Process Source
   · The contractual processing-source condition is separate from qualification of a chemical product. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
3. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada
   · The dated appointment establishes a defined product-category/territory interface rather than access to every Chemetall offering. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
4. METALLIZATION - Insulectro
   · The catalog establishes a represented-product channel for the listed offerings, not blanket access to Qnity's portfolio. ([insulectro.com](https://insulectro.com/metallization/))
5. Specialists in cleaning and disinfection
   · Borer states that legal and licensing requirements reduce its product range in some countries. ([borer.swiss](https://www.borer.swiss/en/company))
6. Commercial Salt Bath Processing in Detroit | Kolene
   · Kolene offers selected commercial processing services at its Detroit plant, distinct from chemical supply. ([kolene.com](https://www.kolene.com/service/commercial-processing/))
7. Qualified Products Database - QPL-81706: Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys
   · The qualification record identifies named CHEMEON, Socomore, and SurTec products and supply-chain roles rather than blanket customer acceptance. ([qpldocs.dla.mil](https://qpldocs.dla.mil/search/print_govt_mfg.aspx?govt=xx.xx))
8. Precious Metal Compounds & Coatings for Electroplating
   · The offering establishes an electroplating-input role, not a universal complete finishing package. ([heraeus-precious-metals.com](https://www.heraeus-precious-metals.com/en/products-solutions/category/precious-metal-compounds-homogeneous-catalysts/salts-solutions-electroplating/))
9. Galvanizing 2.0 | DÖRKEN
   · DÖRKEN distinguishes its DELTA-PROZINC electroplating range from separately described zinc-flake systems. ([doerken.com](https://www.doerken.com/us/en/services/references/delta-coatings/spotlight-galvanizing))
10. Business Model | NOF Corporation
    · NOF identifies GEOMET as a zinc-flake anti-corrosion treatment, supporting a distinct commercial-category comparison. ([nof.co.jp](https://www.nof.co.jp/english/csr/value-creation/plus/))
11. SOCOMORE SOCOSURF Surface Treatment Process | Silmid
    · The catalog establishes an advertised reseller route, not blanket appointment or availability for the principal's entire portfolio. ([silmid.com](https://www.silmid.com/brands/socomore/socomore-paints-and-coatings-content/socosurf-surface-treatment-process/))
12. Products and Services | Corodex Metal Treatment Services
    · Corodex describes industrial chemical-cleaning services within Concorde-Corodex Group. ([corodex-mts.com](https://corodex-mts.com/products-services/))
13. Chemical Cleaning Services - IGTC Chemicals
    · IGTC identifies chemical-cleaning services and its relationship with Al-Mana Holding. ([igtcchemicals.qa](https://www.igtcchemicals.qa/chemical-cleaning-services/))

14. Metal Treatments - Quik
· Quik's metal-treatment catalog identifies CIPL Pty (2021) Ltd as manufacturer/distributor; the broader legal and product boundary remains qualified. ([quikproducts.co.nz](https://quikproducts.co.nz/metal-treatments/))
15. About Us | So Clean Solutions
· So Clean describes acquired chemistry and an advertised Stellar Solutions/CitriSurf distribution relationship; no Freudenberg affiliation is inferred. ([socleansolutions.com](https://www.socleansolutions.com/about-us/))
16. Dynasylan SIVO 210 | Evonik
· Evonik advertises Dynasylan SIVO xx.xx for surface-treatment-related applications, supporting an offering-specific component comparison.
([evonik.com](https://www.evonik.com/en/products/se/pr_52011150.html))
17. Dynasylan SIVO 160 - Safic-Alcan Serbia
· Safic-Alcan's catalog attributes Dynasylan SIVO xx.xx to Evonik and establishes a represented-product channel.
([safic-alcan.com](https://www.safic-alcan.com/en-rs/product-catalog/industrial-specialties/evonik/dynasylan-sivo-xx.xx-xx.xx/))
18. About - Ronatec
· Ronatec advertises proprietary chemistry alongside equipment and technical service.
([ronatec.us](https://ronatec.us/about/))
19. Univertical Product List
· Univertical's catalog separates chemical inputs from anodes and other materials.
([univertical.com](https://univertical.com/wp-content/uploads/2022/xx.xx/Univertical-Product-List.pdf))
20. Scaleva Ácido Metano Sulfónico | Arkema Argentina
· Arkema's localized portfolio connects specialty methanesulfonic-acid grades with electroplating applications, not a complete finishing package.
([arkema.com](https://www.arkema.com/argentina/es/products/odorantes-para-gas-y-productos-base-azufre/scalevar-acido-metano-sulfonico/))
21. Process overview | Aalberts Surface Technologies
· Aalberts publishes a commercial surface-treatment service portfolio.
([aalberts-st.com](https://www.aalberts-st.com/processes-overview/))
22. Chemical treatment pickling - Röhsler & Co
· Röhsler advertises chemical cleaning and pickling services, a different deliverable from chemical supply.
([roe.at](https://roe.at/en/chemical-treatment-pickling/))
23. Surface Technology - Lenzing Technik
· Lenzing Technik advertises pickling, passivation, and electrochemical-polishing services under Lenzing Aktiengesellschaft.
([lenzing-technik.com](https://www.lenzing-technik.com/en/mechanical-production/surface-technology/))
24. About Us | Anochrome Group
· Anochrome describes component-coating and metal-finishing services.
([anochrome.com](https://anochrome.com/about/))
25. About us | Surface Technology UK
· Surface Technology UK describes a component-finishing service business.
([surfacetechnology.co.uk](https://www.surfacetechnology.co.uk/about-us/))
26. Gallade Chemical
· Gallade advertises MacDermid Enthone products through its chemical-supply business.
([galladechem.com](https://www.galladechem.com/))
27. Henkel Beiz- und Elektropoliertechnik Betriebs GmbH - Company Details
· The Austrian industry record identifies Henkel Beiz- und Elektropoliertechnik Betriebs GmbH and treatment-service activities, without establishing a Henkel AG relationship.
([metalltechnischeindustrie.at](https://www.metalltechnischeindustrie.at/en/firms-products/details/henkel-beiz-und-elektropoliertechnik-betriebs-gmbh/))

28. Surface Finishing Chemistry & Engineering | Acculabs
    · Accu-Labs catalogs preparation, plating, specialty-metal, and stripping chemical categories. (acculabsinc.com)

20. Company Profiles

20.1. Henkel AG & Co. KGaA

Henkel offers a broad chemical purchasing interface through BONDERITE, including cleaners, zinc-phosphate and thin-film conversion coatings, light-metal passivation, and anodizing sealing products. ▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ Consolidation remains a conditional purchasing option, not evidence that products are interchangeable or that a common service agreement covers every offering.

Product introductions demonstrate why geographic availability must be assessed separately from portfolio breadth. ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪ ▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪ Retaining specialist suppliers remains appropriate where the required offering, recognized application, or support commitment is not covered by the proposed Henkel arrangement.

Sources & Evidence

1. Less energy, more efficiency: Henkel optimizes aluminum anodizing with new additive Bonderite M-AD 2000A
   - Henkel's August xx.xx 2025 announcement reports European availability and Qualanod approval for BONDERITE M-AD 2000A, while describing introduction elsewhere as gradual future rollout. Approval is supplier-reported here. ([henkel.com](https://www.henkel.com/press-and-media/press-releases-and-kits/2025-xx.xx-xx.xx-less-energy-more-efficiency-henkel-optimizes-aluminum-anodizing-with-new-additive-bonderite-m-ad-2000a-xx.xx))
   - Company verification: Henkel's August xx.xx 2025 announcement identifies BONDERITE M-AD 2000A as a commercially available aluminum-anodizing additive in Europe.
   - Company verification: The announcement establishes continuing commercial activity in Henkel's surface-treatment business.
2. BONDERITE® - Henkel Adhesives
   - Henkel advertises BONDERITE cleaners, zinc-phosphate and thin-film conversion coatings, light-metal passivation, anodizing sealing products, and LineguardX monitoring. This establishes portfolio breadth and an adjacent service offering, not account-specific equivalence or service terms. ([next.henkel-adhesives.com](https://next.henkel-adhesives.com/us/en/our-brands/bonderite.html))
   - Company verification: Henkel markets the BONDERITE surface-treatment portfolio, including conversion coatings, passivation and anodizing-related treatment products.
3. Surface Treatment Chemicals | Surface Treatment by Nihon Parkerizing
   - Company verification: Nihon Parkerizing's official business page identifies Henkel AG & Co. KGaA as its aerospace surface-treatment technology licensing partner.

20.2. Surventis

[illegible] The advertised industrial portfolio includes Gardoclean cleaners, Antox and Gardacid pickling products, Gardobond conversion coatings, Gardolene activating and passivating agents, and Oxsilan pretreatment. These offerings establish a treatment-chemical business distinct from the group's automotive coating activities.

The ownership transition changes the commercial verification question without establishing a need to replace the chemistry. [illegible] Retaining a recognized product can avoid an unnecessary material change, but the continuity statement is not an account-specific fulfillment guarantee.

Canadian distribution illustrates the remaining distinction. [illegible] Canadian customers should obtain confirmation of the current appointment and seller responsibilities before relying on it for a new commitment.

Sources & Evidence

1. Industry
   - Chemetall advertises Gardoclean cleaners, Antox and Gardacid pickling products, Gardobond conversion coatings, Gardolene activating and passivating agents, and Oxsilan pretreatment. ([chemetall.com](https://www.chemetall.com/global/en/industries/industry))
2. Surventis launches as an independent global leader in automotive coatings and surface treatment
   - The July xx.xx 2026 Surventis launch announcement includes Chemetall and states that products, technologies, brands, and technical teams would continue unchanged. The statement is corporate continuity guidance rather than an individual customer commitment. ([chemetall.com](https://www.chemetall.com/global/en/about-us/press-releases/2026/Surventis-launches-as-an-independent-global-leader))
   - Company verification: The July xx.xx 2026 announcement identifies Surventis as the independent successor to BASF Coatings and includes Chemetall in its coatings and surface-treatment portfolio.
   - Company verification: The announcement identifies Carlyle-managed funds, in partnership with Qatar Investment Authority, as majority owners and BASF as a minority shareholder.
3. BASF and Carlyle complete coatings transaction
   - BASF confirms completion of the coatings transaction on June xx.xx 2026, and identifies surface treatment among the businesses comprising Surventis. This establishes a completed transaction rather than a pending proposal. ([basf.com](https://www.basf.com/global/en/media/news-releases/2026/xx.xx/p-xx.xx-xx.xx))
   - Company verification: BASF confirms that the coatings transaction closed on June xx.xx 2026 and that Surventis includes the former automotive coatings and surface-treatment businesses.

4. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada
   - Azelis's April xx.xx 2026 announcement records an expanded appointment to distribute Chemetall surface treatments for general industrial applications throughout Canada. It predates the Surventis transaction and does not itself confirm post-closing agreement terms. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
   - Company verification: Establishes a Canadian distribution relationship for the Chemetall business before the captured June xx.xx 2026 ownership transaction.
   - Company verification: Does not independently establish the post-transaction holding-company identity or current attributed sales.
5. BASF and Carlyle complete coatings transaction
   - Company verification: BASF's July xx.xx 2026 announcement identifies Surventis as the former coatings business including surface treatment.
   - Company verification: The transaction closed June xx.xx 2026, with BASF retaining a xx.xx% equity interest.
   - Company verification: The July xx.xx 2026 announcement confirms that the transaction closed June xx.xx 2026 and that Surventis includes the former BASF surface-treatment business. BASF retained a xx.xx% equity interest. ([basf.com](https://www.basf.com/cn/en/media/news-releases/asia-pacific/2026/xx.xx/apac-xx.xx-xx.xx))

20.3. MKS Inc.

[redacted] Atotech's DynaChrome Plus offering expressly combines equipment and chemistry. Its commercial relevance is therefore not limited to supplying a replacement chemical: an installed-system customer may also be purchasing equipment support and continuing service from the same supplier organization.

[redacted] An integrated arrangement can simplify accountability; separately sourced chemistry can preserve purchasing flexibility where customer acceptance and support terms permit it. The combined offering alone does not establish contractual exclusivity.

Sources & Evidence

1. General Metal Finishing

   · Atotech advertises pretreatment, corrosion protection, decorative finishing, plating-on-plastics, and wear-resistance categories. It lists distinct sales, chemistry-production, and TechCenter roles in Germany, India, and Japan, supporting a regional organizational footprint rather than account-specific service guarantees. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/))

   · Company verification: MKS' Atotech markets general-metal-finishing solutions for industrial plating and surface treatment.

   · Company verification: The business page lists chemistry-production and sales operations in multiple countries, including Canada, China, Germany, India and South Korea, and a sales operation in Spain.

2. MKS Instruments Announces Change of Corporate Name to MKS Inc.

   · MKS's official corporate-name announcement identifies Atotech as an acquired business, establishing the parent-to-business connection used in the profile. ([investor.mks.com](https://investor.mks.com/news-releases/news-release-details/mks-instruments-announces-change-corporate-name-mks-inc))

   · Company verification: The official corporate-name announcement establishes MKS Inc. as the name effective May xx.xx 2025 and identifies Atotech among its acquired businesses.

3. High quality plating lines - The Dyna series by Atotech

   · Atotech presents DynaChrome Plus as combined equipment and chemistry and advertises customer support, documentation, maintenance, and spare-parts services for its plating lines. The page does not establish an individual customer's exclusivity or warranty conditions. ([atotech.com](https://www.atotech.com/products/general-metal-finishing/equipment-technology/plating-lines/))

4. MKS Inc. - FY2025 Form 10-K, filed February 24, 2026

   · Company verification: MKS Inc.'s FY2025 Form xx.xx-K establishes the current corporate reporting identity and ownership of the acquired Atotech business.

   · Company verification: The Materials Solutions Division supplies specialty chemistry for surface modification, plating, surface finishing and corrosion resistance.

   · Company verification: The filing reports continuing chemistry sales activity separately from its descriptions of equipment and other businesses.

5. Atotech México - Líder en galvanoplastia y tratamiento de superficies - Atotech

   · Company verification: Identifies Atotech de México S.A. de C.V. and the MKS Atotech business.

   · Company verification: Advertises electronics and industrial finishing chemistry, including pretreatment and stripping, through the Mexican business.

6. Al Taher Chemicals Product Catalog - Polish Today, Brighter Tomorrow

   · Company verification: Al Taher's catalog identifies Atotech among its represented brands in a UAE/GCC metal-finishing channel; a current appointment is not established by this catalog alone.

20.4. Element Solutions Inc

Element Solutions identifies MacDermid Enthone Industrial Solutions as its surface-finishing chemicals business. ■■■ ■■■■■■■■■ ■■■■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■■■■■ ■■■ ■■■■■■■■■■■■■■■■■ ■■■■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■ This establishes a chemical-supplier role, while the XMAPP mechanism adds a different form of commercial access: discovery of applicators delivering treated parts.

MacDermid Enthone invites buyers to request an approved-applicator list for their application and required region. An OEM seeking finished components can use that mechanism to identify potential processors; a contract finisher purchasing chemicals should not interpret it as a chemical-distributor appointment. ■■■ ■■■■■■■ ■■■ ■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■■

SAMPLE RESEARCH REPORT

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Sources & Evidence

1. Terms and Conditions: Q020 - D1-4426 Approved Process Source
   - Boeing Q020 requires approved processing sources for applicable work, flows the requirement into relevant subcontracts, and preserves seller responsibility. It supports checking customer acceptance separately from supplier-network recognition. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))
2. XMAPP Approved Applicators Request
   - MacDermid Enthone offers an approved-applicator list for delivering treated parts to OEMs and requests the buyer's application and required region. This is a processor-discovery mechanism, not a chemical-distributor appointment. ([industrial.macdermidenthone.cn](https://industrial.macdermidenthone.cn/quality-performance-systems/xmapp/xmapp-approved-applicators-request))
3. Element Solutions Inc. Form 10-K for the year ended December 31, 2025
   - Element Solutions' filing describes industrial metal- and plastic-finishing chemistries used to protect and decorate surfaces, supporting the chemical-supplier role attributed to the business. ([sec.gov](https://www.sec.gov/Archives/edgar/data/xx.xx/xx.xx/esi-xx.xx.htm))
4. Contact Us | Element Solutions Inc
   - Element Solutions identifies MacDermid Enthone Industrial Solutions as its surface-finishing chemicals and solutions business. ([elementsolutionsinc.com](https://www.elementsolutionsinc.com/contact-us))
   - Company verification: Element Solutions' current business contact page identifies MacDermid Enthone Industrial Solutions as its surface-finishing chemicals and solutions business.
5. News & Media | Element Solutions Inc
   - Company verification: Element Solutions' official news page records an October xx.xx 2026 announcement concerning its third-quarter earnings release.
   - Company verification: The page records mutual termination of the Solstice merger agreement on August xx.xx 2026; the contemplated merger is not treated as completed.
6. Our History | Element Solutions Inc (ESI)
   - Company verification: Element Solutions' corporate history identifies MacDermid and Enthone metal-finishing businesses and records the acquisition of Coventya in 2021.
   - Company verification: The history establishes Platform Specialty Products as the company's previous name.
7. Element Solutions Inc Announces Closing of Coventya Acquisition
   - Company verification: Element Solutions announced the completed acquisition of Coventya on September xx.xx 2021 and described it as a provider of specialty chemicals for surface finishing.
   - Company verification: The acquired business joined MacDermid Enthone Industrial Solutions.
8. Politeknik Metal Sanayi ve Ticaret Anonim Şirketi - 31 Mart 2025 Finansal Rapor
   - Company verification: Politeknik Metal's March xx.xx 2025 financial record identifies Coventya Beteiligung GmbH as its controlling shareholder.
   - Company verification: The filing records related-party relationships with Element Solutions and MacDermid businesses, supporting reconciliation with the existing group identity rather than a separate Politeknik addition.

9. About - Amza
   - Company verification: Amza describes an Israeli manufacturing center for finishing-industry chemicals and states that it is part of the MacDermid Group.
   - Company verification: This establishes a stated affiliation, not independently resolved equity ownership or a license agreement.

20.5. Nihon Parkerizing

[illegible] Buyers should therefore identify the regional chemical seller rather than infer a chemical-delivery route from any group facility. Purchasing chemicals and outsourcing treatment remain different commercial relationships.

The company also discloses a renewed aerospace surface-treatment technology license with Henkel. [illegible] The licensing disclosure does not establish product interchangeability or transferable approvals.

Sources & Evidence

1. Surface Treatment Chemicals | Surface Treatment by Nihon Parkerizing
   - Nihon Parkerizing advertises cleaning, corrosion-resistance, and paint-base chemicals and discloses a renewed aerospace surface-treatment technology license with Henkel. The undated statement does not establish present territorial, exclusivity, or individual offering rights. ([parker.co.jp](https://www.parker.co.jp/en/business/surface/index.html))
   - Company verification: Nihon Parkerizing supplies surface-treatment chemicals for substrate cleaning, corrosion resistance, paint-base preparation and other industrial surface functions.
   - Company verification: Its business page reports a renewed aerospace surface-treatment technology license relationship with Henkel.
2. Nihon Parkerizing Group Integrated Report 2025
   - Nihon Parkerizing's integrated report separates chemical, engineering, and toll-processing businesses. It describes chemical operations in Europe and mainly toll-processing operations in the United States and Mexico, supporting region-specific interpretation of the group footprint. ([parker.co.jp](https://www.parker.co.jp/en/_pdf/csr/CorporateReport2025e.pdf))
   - Company verification: Nihon Parkerizing's Integrated Report 2025 establishes the corporate reporting identity and continuing international surface-treatment business.
   - Company verification: The report identifies regional chemical-business activity and group operating relationships.
3. 第 141 期定時株主総会 その他の電子提供措置事項（交付書面省略事項）
   - Company verification: Nihon Parkerizing's fiscal-year-ended-March-xx.xx-2026 consolidated notes, released June xx.xx 2026, identify Parker Corporation among its equity-method associates rather than fully consolidated subsidiaries. ([parker.co.jp](https://www.parker.co.jp/ja/_pdf/topics/141Webkaiji_jp.pdf))

20.6. Hubbard-Hall

[redacted] Its December xx.xx 2025 acquisition of JSA/Metalline assets extended direct commercial coverage into the Upper Midwest and retained the customer-facing team in Mequon, Wisconsin. The announced coverage includes Hubbard-Hall proprietary products alongside PAVCO and MetalChem offerings.

For a regional finisher, this creates a potential common ordering and support interface across products with different principals. The relevant advantage is the documented local commercial team, not an assumption that Hubbard-Hall owns every supplied technology. [redacted]

Sources & Evidence

1. Hubbard-Hall Acquires Assets of JSA/Metalline
   - Hubbard-Hall's December xx.xx 2025 announcement records the JSA/Metalline asset acquisition, retention of its customer-facing team in Mequon, and expanded Midwest coverage for Hubbard-Hall proprietary products, PAVCO specialties, and MetalChem electroless-nickel products. ([hubbardhall.com](https://www.hubbardhall.com/about/news/hubbard-hall-acquires-assets-jsametalline))
   - Company verification: Hubbard-Hall's December xx.xx 2025 acquisition announcement establishes its proprietary chemistry and distribution role in plating and general metal finishing.
   - Company verification: The announcement identifies expanded Midwest sales coverage through acquired JSA/Metalline assets.
2. Hubbard-Hall Acquires Prosys Finishing Technology, Expands Plating Product Offering and Deepens Technical Expertise
   - The April xx.xx 2024 Prosys acquisition announcement establishes a PAVCO distributorship, Northeast distribution of MetalChem electroless-nickel products, and acquisition of proprietary cleaning and finishing formulas. It supports distinguishing owned offerings from represented products. ([hubbardhall.com](https://www.hubbardhall.com/about/news/hubbard-hall-acquires-prosys-finishing-technology-expands-plating-product-offering-and-deepens-technical-expertise))
3. Hubbard-Hall appointed Aaron Mambrino as Chief Operating Officer and Executive Vice President of the Company
   - Company verification: Hubbard-Hall's executive-appointment announcement describes sixth-generation family leadership under Kellogg.
   - Company verification: It identifies the company's chemical-distribution business and Women Owned Small Business certification, complementing the captured proprietary finishing-chemistry and acquisition records.

20.7. MEC COMPANY LTD.

[redacted] Its official China portfolio advertises CZ

adhesion-enhancement treatments, selective and anisotropic etching, and electronic-substrate pretreatment for multilayer and semiconductor-package substrates. These commercial functions concern metal-surface preparation and metal-resin interfaces; they should not be treated as equivalent to deposition chemistry merely because the materials serve the same electronics customer.

The regional company profile identifies Suzhou and Zhuhai operating companies and connects the group to its Japanese headquarters. This provides a regional operating-entity bridge, not evidence that both companies supply every advertised product. ■■ ■■■■■■■■■■■■ ■■■■■ ■■■■■■ ■■■■■■■ ■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■ ■■ ■■■■■■■ ■■■■■ ■■■■■■■■■ ■■■■ ■■■■■■ ■■■■■■■■■■■■ ■■ ■■■■ ■■■■■■■■■ ■■■■■■■ ■■■■■■■ ■■■■■■■■■■■■■ ■■■ ■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■ ■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■ ■■■■■ ■■■■■■■■■■■■ ■■■■ ■ ■■■■■ ■■■■■■■■■■■■■■■■■■ ■■■■■■■■ ■■■■■ ■■■■■■■■■ ■■■■■■■■■■■■ ■■ ■■■■ ■■■■ ■■■■■■■■ ■■ ■■■■■■■■ ■■■■■■■■■

Sources & Evidence

1. 产品信息 | 美格中国 MEC

   · MEC's official China portfolio advertises CZ adhesion-enhancement treatments, selective and anisotropic etching, and electronic-substrate pretreatment for multilayer and semiconductor-package substrates. These are advertised commercial functions, not evidence of every product's local availability. ([mec-co.cn](https://mec-co.cn/product/index.html))

2. 公司概要 | 美格中国 MEC

   · The regional MEC company profile identifies Suzhou and Zhuhai operating companies, describes electronic-substrate chemical manufacture and sales, and identifies the Japanese headquarters within the group. It does not assign every advertised product to both regional companies. ([mec-co.cn](https://mec-co.cn/company/profile/index.html))

3. Site Map | MEC COMPANY LTD.

   · Company verification: MEC's official sitemap lists electronic-substrate chemicals, adhesion-enhancement treatments, microetching, pretreatment and other metal-surface-treatment categories.

   · Company verification: The sitemap establishes advertised portfolio classification, not detailed current product availability or country-specific sales.

20.8. Qnity Electronics, Inc.

Qnity's semiconductor-packaging portfolio includes copper redistribution-layer and copper-pillar plating materials, under-bump-metallization chemistry, and SOLDERON BP electroplating products. These establish application-specific deposition offerings, not interchangeability across packaging materials. ■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■ ■■■■■■■■■■■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■■■■ ■ ■■■■■■■■■■ ■■■■■■■■ ■■■■■■ ■■■■■■■ ■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■■ ■■■■■■■ ■■ ■■■■■ ■■■■■■■■■■■■■■■■■■■■■■■■■ ■■■■■■■

Qnity completed its separation from DuPont on November xx.xx 2025. Its filing also describes program-specific design wins and qualification cycles that can extend across multiple quarters. ■■■ ■■ ■■■■■■■■ ■■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■■ ■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■■■■ ■■■■■■ ■■■■ ■■■■■■■■■■■■■ ■■■■■■■■■■■■ ■ ■■■■■■■■■■ ■■■■■■■■■ ■ ■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■ ■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■

[redacted]

Sources & Evidence

1. Semiconductor Packaging Materials
   - Qnity advertises copper redistribution-layer and copper-pillar plating materials, under-bump-metallization chemistry, and SOLDERON BP electroplating products for semiconductor packaging. These are distinct application-specific commercial offerings. ([qnityelectronics.com](https://www.qnityelectronics.com/semiconductor-packaging-materials.html))
   - Company verification: Qnity offers electroplating materials for semiconductor packaging, including copper plating, under-bump metallization and the SOLDERON BP plating family.
   - Company verification: The commercial portfolio distinguishes plating materials from other packaging materials.
2. Qnity Electronics, Inc. Form 10-K for the year ended December 31, 2025
   - Qnity's filing confirms completion of its separation from DuPont on November xx.xx 2025. It describes program-specific design wins and semiconductor and advanced-electronics qualification cycles that can extend across multiple quarters. ([ir.qnityelectronics.com](https://ir.qnityelectronics.com/sec-filings/all-sec-filings/content/xx.xx-xx.xx-xx.xx/xx.xx-xx.xx-xx.xx.pdf))
   - Company verification: Qnity's FY2025 Form xx.xx-K confirms completion of its separation from DuPont on November xx.xx 2025.
   - Company verification: Qnity became an independent publicly traded company and began regular-way NYSE trading on November xx.xx 2025.
   - Company verification: Its Advanced Circuit and Packaging business supplies electroless and electrolytic plating chemistry and final-finishing solutions.
3. METALLIZATION - Insulectro
   - Insulectro advertises Qnity-branded copper-metallization offerings. This independently corroborates a channel for the listed products, not distribution rights or availability for every Qnity semiconductor-packaging material. ([insulectro.com](https://insulectro.com/metallization/))
   - Company verification: Insulectro's commercial catalog provides independent channel corroboration for Qnity-branded metallization offerings.

20.9. TANAKA PRECIOUS METAL GROUP Co., Ltd.

TANAKA's surface-treatment capability is identifiable through operating businesses rather than precious-metal ownership alone. [redacted] These establish distinct chemical-supplier roles within the group, not interchangeability between their offerings.

[redacted]

[redacted] The group relationship does not establish a single regional seller or common delivery commitment. Before consolidating procurement, obtain an offering-specific quotation naming the responsible operating company and local counterparty; retain separate sourcing where the proposed package does not cover the required obligations.

Sources & Evidence

1. Group Companies | About Us | TANAKA
   - TANAKA's group structure identifies EEJA and Metalor as wholly owned subsidiaries of TANAKA PRECIOUS METAL TECHNOLOGIES, itself a wholly owned subsidiary of the holding company, and attributes plating-solution activities to both businesses. ([tanaka.co.jp](https://www.tanaka.co.jp/english/company/group/))
   - Company verification: TANAKA's group listing identifies EEJA and Metalor as wholly owned businesses within its precious-metal technologies structure.
   - Company verification: EEJA develops, manufactures and sells precious-metal and base-metal plating solutions; Metalor produces and sells plating solutions and equipment.
2. EEJA Ltd. | Group Companies | About Us | TANAKA
   - EEJA's company record attributes development, manufacturing, sales, and export of precious-metal and base-metal plating solutions to EEJA and identifies semiconductor and electronic-device applications. ([tanaka.co.jp](https://www.tanaka.co.jp/english/company/group/eeja/))
   - Company verification: TANAKA's EEJA company record identifies development, manufacture, sales and export of precious-metal and base-metal plating solutions.
   - Company verification: The record establishes EEJA's market-facing operating role within TANAKA and describes its historical joint-venture origin without treating that origin as current ownership.
3. Plating - METALOR
   - Metalor advertises precious-metal plating products for electronics, semiconductor, and decorative applications, alongside replenishment products, equipment, installation support, and recycling services. These offerings support a conditional procurement-consolidation proposition, not proven buyer savings. ([metalor.com](https://metalor.com/watch-jewellery-decorative/plating/))
   - Company verification: Metalor's commercial portfolio offers electrolytic and electroless precious-metal plating products for electronics, semiconductor and decorative applications.
   - Company verification: The offering includes process chemistry and related commercial services.
4. History | About Us | TANAKA
   - Company verification: TANAKA's corporate history identifies the 2025 transition to a management structure centered on TANAKA PRECIOUS METAL GROUP Co., Ltd.
   - Company verification: The history documents current group-company name changes and Metalor's entry into the group.

20.10. Azelis

Azelis provides a documented distribution route rather than an inferred manufacturing capability. Its April xx.xx 2026 announcement identifies an expanded Chemetall appointment covering general industrial surface-treatment applications throughout Canada. [redacted]

The appointment predates Surventis's July xx.xx 2026 separation from BASF. [redacted] Portal access can simplify transactions, but it cannot replace those commitments; the Canadian supplier-side office provides a separate contact for verifying the relationship.

Sources & Evidence

1. Surventis launches as an independent global leader in automotive coatings and surface treatment
   - Surventis announced completion of its separation from BASF on July xx.xx 2026, retained Chemetall among its brands, and announced continuity of products and technical teams. This announcement does not specify Azelis's continuing contractual rights. ([chemetall.com](https://www.chemetall.com/global/en/about-us/press-releases/2026/Surventis-launches-as-an-independent-global-leader))
2. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada
   - The April xx.xx 2026 announcement identifies Azelis's appointment for Chemetall general industrial surface-treatment products throughout Canada and describes portals for ordering and product and safety information. ([azelis.com](https://www.azelis.com/en/news/azelis-and-chemetall-expand-strategic-distribution-agreement-for-surface-treatment-market-xx.xx))
   - Company verification: On April xx.xx 2026, announced an expanded agreement to distribute Chemetall surface-treatment products for general industrial applications throughout Canada.
3. Americas
   - Chemetall's Americas directory identifies a Canadian sales office and warehouse under Surventis Surface Treatment Limited, formerly Chemetall Canada Limited. The listing establishes a supplier-side contact, not Azelis's agreement terms. ([chemetall.com](https://www.chemetall.com/global/en/locations/americas))

20.11. Química Sigma

[redacted] It identifies itself as an Argentine industrial company and describes commercial representation in Paraguay, Uruguay, and Peru. This establishes a regional commercial proposition, while representation remains distinct from ownership of a local producer or a binding delivery obligation.

[redacted] The undated disclosure does not establish current license duration, territorial exclusivity, or ownership.

Licensed supply can provide another counterparty, but introduces an accountability split that direct purchasing from Sigma would not resolve in the same way.

Sources & Evidence

1. Química Sigma: Tratamiento de Superficies
   - Química Sigma advertises metal-treatment chemical development, manufacture, and commercialization, with degreasers, phosphate treatments, zirconium treatments, and aluminum passivation categories. ([quimicasigma.com](https://quimicasigma.com/index.php/tratamiento-de-superficies))
   - Company verification: Química Sigma states that it develops, manufactures, and commercializes chemicals for metallic surface treatment.
   - Company verification: The portfolio lists phosphate treatments, zirconium-based conversion treatments, degreasers, and aluminum passivation products.
2. Química Sigma, información institucional.
   - Química Sigma identifies itself as an Argentine industrial company and states that it has commercial representatives in Paraguay, Uruguay, and Peru. ([quimicasigma.com](https://quimicasigma.com/index.php/institucional))
   - Company verification: Sigma identifies itself as an Argentine industrial company.
   - Company verification: Its institutional page identifies commercial representation in Paraguay, Uruguay, and Peru.
3. Fabricación de productos para tratamientos de superficies - CYV Industrias
   - C&V Industrias states that it manufactures Sigmaclean, Sigmadex, Sigmafos, and Sigmasel products under license from QUIMICA SIGMA SRL. The undated business disclosure supports a stated licensed-production relationship, not its current duration, exclusivity, or ownership terms. ([cyvindustrias.com](https://cyvindustrias.com/fabricacion-de-productos-para-tratamientos-de-superficies/))
4. C & V INDUSTRIAS - Fabricación de productos para tratamiento de superficies
   - Company verification: C & V identifies Química Sigma as its licensing partner for the listed metal pretreatment products.

20.12. Borer Chemie AG

Borer Chemie AG offers a cleanliness-led alternative to suppliers centered on deposition or conversion coatings. Its industrial portfolio includes deconex MT cleaners for implant and instrument manufacturing, OP products for optics, flat-glass-display cleaning products, and deconex de-coat chemicals for tools. ■■ ■■■■ ■■■■■■■■■■ ■■■■■■■ ■■■■■■■■■■■■■ ■■■ ■■■■■■■■■■■ ■■■■■■■■ ■■■■■ ■■■ ■■■■■■■■■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■ ■■■■■■■■■■ ■ ■■■■■■■■■■■■■■■■■■■■■■ ■■■■■■■■■■■ ■■■■ ■■■ ■■■■■■ ■■■■■■■■■ ■■■■■■ ■■■■■■■■■■■■■ ■■ ■ ■■■■■■■■■■■■■■■■■■■■■ ■■■■■■■■

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Sources & Evidence

1. Borer Industry
   · Borer's industrial portfolio identifies deconex MT for implant and instrument manufacturing, OP for optics, flat-glass-display cleaning products, and de-coat chemicals for tools; it also advertises documentation and after-sales services. ([borer.swiss](https://www.borer.swiss/en/industry))
2. Specialists in cleaning and disinfection
   · Borer describes Swiss production, direct and partner distribution, specified industrial responsibilities for its Shanghai subsidiary, and reduced product ranges in some countries because of legal and licensing requirements. ([borer.swiss](https://www.borer.swiss/en/company))
3. deconex® MT 41: Passivation process reinterpreted
   · Company verification: Identifies Borer Chemie AG and deconex MT xx.xx as a commercial passivation offering.

20.13. SUGEST

SUGEST presents a Saudi production-and-supply proposition for metal-treatment buyers. The company describes specialty-chemical development, production, and distribution and identifies plants in Riyadh's Third Industrial Area. ■■■ ■■■■■■■■■■■■■■■ ■■■■■■■ ■■■■■■ ■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■■■■■■ ■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■ ■■■■■ ■■■■■■■■■■ ■■■■ ■■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■ ■■■■■■■■■ ■■■■■■■■■■■ ■■■■ ■■■■■■■■ ■ ■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■ ■■■■■■ ■■■■ ■■■■■■■■■ ■■■■■ ■■■■ ■■ ■ ■■■■■■■ ■■■■■■■■■■■■■■■■ ■■■■■■■■■

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Sources & Evidence

1. About Us - SUGEST
   · SUGEST describes specialty-chemical development, production, and distribution and identifies production plants in Riyadh's Third Industrial Area. This is the company's production claim, not a product-specific delivery commitment. ([sugest.com.sa](https://sugest.com.sa/about-us/))
   · Company verification: SUGEST identifies itself as a Saudi specialty-chemical developer, producer and distributor established in Riyadh.
   · Company verification: The company describes production facilities in Riyadh's Third Industrial Area and a metal surface-treatment chemical business.
2. Metal Treatment - SUGEST
   · SUGEST's metal-treatment catalog lists cleaning, phosphating, aluminum treatment, anodizing-related offerings, passivation, and paint stripping and identifies Duraclean and Durapass product families. ([sugest.com.sa](https://sugest.com.sa/product-categories/metal-treatment/))
   · Company verification: SUGEST's commercial metal-treatment portfolio lists phosphating, aluminum treatment, anodizing-related treatment, passivation and paint-stripping categories.

20.14. CHIMI ART

CHIMI ART contributes an Egyptian manufacturing proposition and an identifiable galvanizing-flux offering. ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪▪ ▪▪ ▪▪▪ ▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪▪ ▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪ ▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪▪▪▪▪▪ ▪▪▪▪ ▪▪▪ ▪▪▪▪▪▪▪▪▪ ▪▪▪▪▪▪▪▪▪▪ That supports a relevant production claim without attributing the entire site's activity to surface treatment.

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Sources & Evidence

1. Our Facilities - Chemical Manufacturing in Egypt | CHIMI ART
   - CHIMI ART states that it manufactures in its own facilities in 6th of October City, Egypt, and identifies surface-treatment chemicals within a facility also serving fuel and specialty products. ([chimiart.com](https://www.chimiart.com/en/about/facilities))
   - Company verification: CHIMI ART states that it manufactures in its own facilities in 6th of October City, Egypt, including a facility serving surface-treatment chemicals.
2. Water Treatment, Fuel & Surface Treatment Solutions | CHIMI ART
   - CHIMI ART's surface-treatment offering lists cleaning agents and galvanizing flux in powder and solution forms, with metal-finishing, cleaning, etching, and surface-preparation applications. Advertised applications do not establish customer-specific acceptance. ([chimiart.com](https://www.chimiart.com/en/solutions))
   - Company verification: CHIMI ART markets a surface-treatment business covering metal finishing, etching, cleaning and surface preparation, with cleaning agents and galvanizing-flux product categories.

20.15. Kolene Corporation

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turnaround, and treated-part acceptance obligations that require agreement. The service purchase remains distinct from the chemical offering studied here.

Geographic access also has a documented counterpart: Kolene lists Parker Corporation as an affiliation for Japan and part of China, and Parker independently lists KOLENE among its steel-material chemical offerings. ■■■■ ■■■■■■■■ ■ ■■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■■ ■■ ■■■■■■■■■■■■ ■■ ■■■■■ ■■■■■■ Buyers using that route should confirm the named product, seller, and division of chemical and equipment-support responsibilities before commitment.

Sources & Evidence

1. Molten Salt Cleaning & Descaling Chemicals | Kolene
   - Kolene states that it manufactures industrial cleaning chemicals and lists DGS and Kolene No. xx.xx descaling products and Recover xx.xx for paint-and-powder removal. ([kolene.com](https://www.kolene.com/product/cleaning-chemicals/))
   - Company verification: Kolene states that it manufactures industrial cleaning process chemicals.
   - Company verification: The catalog advertises named descaling and surface-preparation offerings, including DGS and Kolene No. xx.xx.
   - Company verification: Recover xx.xx is advertised for paint and powder removal from metal components.
2. About Us: Molten Salt Specialists Since 1939 | Kolene
   - Kolene describes supplying both equipment and chemicals with customer support and lists Parker Corporation as an affiliation serving Japan and part of China. ([kolene.com](https://www.kolene.com/about-us/))
3. Commercial Salt Bath Processing in Detroit | Kolene
   - Kolene advertises commercial processing of parts at its Detroit plant for selected stripping and cleaning applications. This establishes a treatment-service alternative distinct from purchasing chemicals for an in-house operation. ([kolene.com](https://www.kolene.com/service/commercial-processing/))
4. Chemical Business | Parker corporation
   - Parker Corporation's chemical-business portfolio independently lists KOLENE among steel-material-related chemicals and separately lists associated equipment. The portfolio does not specify grade-level appointment or exclusivity terms. ([parkercorp.co.jp](https://www.parkercorp.co.jp/en/chemical/))
   - Company verification: Parker Corporation lists KOLENE among its steel-material-related chemical offerings, establishing an advertised Japanese commercial route.

20.16. FUJIFILM

■■■■■■■■ ■■■ ■ ■■■■■■■■ ■■■■■■■■■■■■■■■■■■■■■■ ■■■■■ ■■■ ■■■■■■ ■■ ■■■■■■■■ ■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■■ ■■■■■■■■■ ■■■ ■■■■ ■■■■■■■■■■■■ ■■■■■■■■■■ ■■ ■■■■■■■■■■■■■■■■■■ ■■■ ■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■ ■■ ■■ ■■■■■■■ ■■■■■■■■■■■■■ ■■■■■■ ■■■■■■■■■■■■■ That is supplier-reported adoption of a polishing material, not independent customer confirmation or transferable acceptance at another buyer. The relevant purchase is the surface-polishing chemical; the company's wider semiconductor portfolio should not automatically be treated as equivalent activity.

The October xx.xx 2026 announcement identifies a production site operated by FUJIFILM Electronic Materials U.S.A., Inc. in Mesa, Arizona, and schedules additional CMP production facilities to begin operations in 2027. ■■■■■■ ■■■■■■ ■■■■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■ ■■■■■■■■ ■■■■ ■■■ ■■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■ ■■■■■ ■■■■■■■■ ■■■■■■■■ ■■■■■ ■■

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Semiconductor procurement can consider FUJIFILM on the strength of an identified offering and reported adoption, while requiring its own material acceptance and an agreement naming the seller, product, and supply location. ■■■■■■■■ ■■■■■■■■■■ ■■■■■■■ ■■■ ■■■■■■■ ■■■■■■■■ ■■■■■ ■■■ ■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■■■■ An account should not depend on the planned addition until its operation and product-specific commercial availability are confirmed.

Sources & Evidence

1. Fujifilm Launches Advanced Packaging CMP Slurry
   · FUJIFILM Corporation's September xx.xx 2025 announcement launches an advanced-packaging CMP slurry and explicitly reports adoption by an unnamed semiconductor device manufacturer. The adoption statement is supplier-reported, not independently attributed customer confirmation. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))
2. Fujifilm to Expand CMP Slurry Production Capacity in the United States | Fujifilm [Switzerland]
   · The October xx.xx 2026 announcement identifies FUJIFILM Electronic Materials U.S.A., Inc.'s Mesa, Arizona, production site and schedules the additional CMP production facilities to begin operations in 2027; it does not announce their completed operation. ([fujifilm.com](https://www.fujifilm.com/ch/en/news/hq/xx.xx))

20.17. CHEMEON Surface Technology, LLC

CHEMEON Surface Technology, LLC offers a specialist metal-finishing portfolio centered on eTCP and TCP-HF trivalent conversion coatings, alongside anodizing chemistry, cleaners, dyes, and seals. ■■■ ■■■■■■■ ■■■■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■■■ ■■■ ■■■■■■ ■■■■■■■■ ■■■■■■ ■■■■■■ ■■■■■■■■■■ ■■■■■■ ■■■■■ ■■■■■■■ ■■■■ ■■■■■ ■■ ■■■■ ■■■■■■■■■■■ ■■■■■■■ ■■ ■■■■■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■ ■■ ■■■■■■ ■■■■■■■■■■ ■■ ■■■ ■■■■■■ This supports named-product qualification, not blanket qualification of the catalog; the listing establishes neither plant ownership nor contractual supply responsibilities.

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For an international finisher, the SurTec-mediated route can be preferable to relying solely on CHEMEON's Nevada organization when the partner confirms local ordering and support for the required offering. ■■■ ■■■■■■■■■ ■■ ■■■■■■■■■■ ■■ ■■■■■■■■ ■■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■ ■■■■■■■ ■■■■■■■■■■■■■■■■ ■■■■■■ ■■■■■■■■■■■ ■■■■■■ ■■■■■■■■■ ■■■ ■■■■■■■■■■■■■■■ ■■■■■ ■■■■■■ ■■■ ■■■■■ ■■■■■■■■ ■■■■■■■■■■■ ■■■■■■ ■■■■■ ■■■■■■■■■ ■■■ ■■■■■■■■■■■■■ ■■■■■■■■■■■ ■■■■■ ■■■■■■■■ ■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■ ■■■■■■ ■■■■■■■■■■ ■■■■■■■■ ■■ ■■■■■■■■■■■ ■■■■■ ■■■■■■■■ ■■■ ■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■■■■

RESEARCH SAMPLE REPORT

[redacted] QPL status and alliance access do not replace that contractual check.

Sources & Evidence

1. Terms and Conditions: Q020 - D1-4426 Approved Process Source

   · Boeing Q020 requires approved processing sources where applicable, extends the requirement into covered subcontracts, and preserves the seller's contractual responsibility. This establishes a buyer-access condition separate from chemical qualification, not CHEMEON-specific acceptance or rejection. ([boeingsuppliers.com](https://www.boeingsuppliers.com/clauses/docs/Q020_D1-xx.xx%20Approved%20Process%20Source_10082024.pdf))

2. About Chemeon

   · CHEMEON identifies its Minden, Nevada business, eTCP and TCP-HF trivalent conversion coatings, anodizing chemistry, cleaners, dyes, seals, and advertised on-site and remote support. These are supplier-described offerings and services, not independently demonstrated comparative outcomes. ([chemeon.com](https://chemeon.com/about-chemeon/))

   · Company verification: CHEMEON's company profile identifies its Minden, Nevada business and publicly offered conversion-coating, anodizing-related, cleaning and sealing chemistry. The page describes U.S. and international commercial customers; promotional leadership and performance claims are not adopted. ([chemeon.com](https://chemeon.com/about-chemeon/))

3. Qualified Products Database - QPL-81706: Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys

   · The active QPL-xx.xx entry lists CHEMEON ETCP TOUCH UP PEN, CHEMEON Surface Technology, LLC as manufacturer, and QUALICHEM, INC. in Salem, Virginia, as plant. The entry documents qualification roles rather than ownership or contractual obligations. ([qpldocs.dla.mil](https://qpldocs.dla.mil/search/print_govt_mfg.aspx?govt=xx.xx))

   · Company verification: The inspected DLA record identifies CHEMEON Surface Technology, LLC as manufacturer of named CHEMEON treatment products, including CHEMEON ETCP TOUCH UP PEN. The displayed dataset was updated September xx.xx 2026. ([qpldocs.dla.mil](https://qpldocs.dla.mil/search/print_govt_mfg.aspx?govt=xx.xx))

4. CHEMEON and SurTec Form Strategic Alliance in Global Surface Technology Market

   · The March xx.xx 2026 announcement assigns CHEMEON expanded U.S. access for selected SurTec products and SurTec an international offering role for CHEMEON products using local expertise and infrastructure. It identifies CHEMEON's Nevada center as a satellite sales hub, without establishing country-specific fulfillment or an acquisition. ([surtec.com](https://www.surtec.com/en/company/news/chemeon-and-surtec-form-strategic-alliance-in-global-surface-technology-market/))

   · Company verification: The March xx.xx 2026 announcement identifies CHEMEON as a U.S. surface-treatment provider and establishes reciprocal commercial access involving CHEMEON eTCP and the SurTec xx.xx portfolio. ([surtec.com](https://www.surtec.com/en/company/news/chemeon-and-surtec-form-strategic-alliance-in-global-surface-technology-market/))

5. Strategic Alignment, Global Reach: Chemeon and SurTec Forge Alliance to Advance Sustainable Surface Finishing

   · CHEMEON's May xx.xx 2026 account reports that joint teams were already cross-training in Nevada, Ohio, and Germany. This supports supplier-reported service coordination, not independently verified local fulfillment or binding account commitments. ([chemeon.com](https://chemeon.com/in-the-press/strategic-alignment-global-reach-chemeon-and-surtec-forge-alliance-to-advance-sustainable-surface-finishing/))

21. Companies Covered

Table 528. Global Chemical Surface Treatment Market, Companies Covered

Company
A Brite Company
Aalberts
ABEPLAST
Accu-Labs
AD International B.V.
ADHITEC
Afra Tajhiz Shimi
Al Taher Chemicals Trading LLC
Al-Mana Holding
Albarr Services
ALIT Technologies SpA
Allenchrome Electroplating Ltd
ALPHA QUIMICA S.A.
Alufinish GmbH & Co. KG
ANC KOREA Co., Ltd.
Anochrome Group
Aqua Bond Inc.
Arazul
ARDE Plastik Metal Kaplama Tesisleri San. ve Tic. Ltd. Şti.
Arkema
Astena Holdings Co., Ltd.
Asterion
Astra Coatings Limited
Atılım Kimya Sanayi ve Ticaret A.Ş.
Auromex Co., Ltd.
Austum Chemical
Axis Group
Axis Industrial
Azelis
BAF do Brasil

Table 528 - continued

Company
Bakou Chemical
BIG CROMO
Birchwood Laboratories LLC
Blautech Industrial
Blue Chip Enterprises
Blume Metal Kimya A.Ş.
BNAC Environmental Solutions Inc.
Bochemie a.s.
Borer Chemie AG
Brüno Metal
Bulk Chemicals, Inc.
BYCSA
C & V Industrias
C. Uyemura & Co., Ltd.
CADILHAC
Callington Haven Pty Ltd
Calvary Industries
Canadian Finishing Systems
Central Química Argentina S.A.
Chem Coat India
Chemco Products Company
CHEMEON Surface Technology, LLC
Chemische Werke Kluthe GmbH
Chemplus
Chemtec S.r.l.
Chemtec Srl
Chemtech International
Chemval
CHIMI ART
Chimiderouil
Chimimeca SAS
CIPL Pty (2021) Ltd

Table 528 - continued

Company
Circle-Prosco, Inc.
Cogemat Tunisie
Columbia Chemical
Concorde-Corodex Group
Condoroil Chemical Srl
Corozin
Covalent Technologies Industries LLC
Cromogenia Units, S.A.
Damla Chemical
DEWE Brünofix GmbH
Diamond Jewel Co
Dileta Indústria e Comércio de Produtos Químicos Ltda.
DK Chemical Co., Ltd.
Dollmar S.p.A.
Dosakin Ltda.
Dr. Hesse GmbH & Cie. KG
Dr.-Ing. Max Schlötter GmbH & Co. KG
Dro Pur S.A.
DuBois Chemicals
Dynamix Inc.
DÖRKEN Coatings
Ecochemic
Ecolkem S.A. de C.V.
Ecotomer
Ekol
ElectroChem Technologies India Private Limited
Electrochemical Plating
Electrochemical Products, Inc.
Element Solutions Inc
Entek Group of Companies
Epoxy Oilserv
Epunion International Enterprise Co., Ltd.

Table 528 - continued

Company
Eternal Gloria Industrial Co. Ltd
Evonik Industries
Fosfamet
Freudenberg SE
FUCHS
FUJI KASEI (THAILAND) LTD.
FUJIFILM
Fusion for Specific Chemicals
Gallade Chemical, Inc.
Galtron Química
Galvabor Galvanoteknik Makina ve Kimya San. Tic. Ltd. Şti.
Galvamed
Galvano Mondo
Galvano-Partners
GMD Chemicals
GOKEM International Chemical Company Limited
Grauer & Weil (India) Limited
GSI Chemicals International
GTZ (India) Pvt. Ltd.
Guangdong Guanghua Sci-Tech Co., Ltd.
Guangzhou Sanfu New Materials Technology Co., Ltd.
Haviland Enterprises, Inc.
Hawkins, Inc.
HelwanChem
Henkel AG & Co. KGaA
Henkel Beiz- und Elektropoliertechnik Betriebs GmbH
Heraeus Precious Metals
Hillebrand Chemicals Kimya Paz. Ltd. Şti.
Holsen Interchem Sdn Bhd
HTS S.R.L.
Hubbard-Hall
Hunter Chemical LLC

Table 528 - continued

Company
Hydrite
Hypersonic Inc.
Incheon Chemical Co., Ltd.
Industrial Alianza Ltda.
Industrias Químicas Sepmont, S.A. de C.V.
Industrias Trevigo
Insulectro
Ionic Solutions
Ishihara Chemical Co., Ltd.
ITONOR S.A.
Japan Pure Chemical Co., Ltd.
JCU Corporation
Jiangsu Aisen Semiconductor Material Co., Ltd.
Kanematsu Corporation
KCI Chemical Company
Khimkroff
KhimNikel
KIESOW OBERFLÄCHENCHEMIE GmbH & Co. KG
Kiki's Industrial Chemicals
Kimfosan
Kivi Industrial Chemicals Limited
Klintex Insumos Industriais Ltda.
Kolene Corporation
Krome Metal Chemicals (Pty) Ltd
KSO Group
KYZEN
Laring
Lenzing Aktiengesellschaft
Lotorp
Luster-On Products Inc.
Madison Chemical Co., Inc.
Mavom

Table 528 - continued

Company
MEC COMPANY LTD.
Mehta Sanghvi & Co.
Mesalp Kimyevi Ürünler
Met Kimya
MetalChem
METURGEN
MKS Inc.
MSC
Muscat and Barka Business Trading
Nanmat Technology Co., Ltd.
Net Kimya
Nihon Parkerizing
Nippon Paint Holdings Co., Ltd.
Nippon Surface Chemical
NOF Corporation
Noga Chemical Kimyasal Dış Tic. A.Ş.
NPP Ekomet
NPP SEM.M
Odya Kimya
Okuno Chemical Industries Co., Ltd.
Onvano
Optiva Endüstri
Osmanoğulları Kimya
P.M.D. CHEMICALS LIMITED
Padmavati Chemtech Private Limited
Pantoquímica
Parker Corporation
Pars Nickel
PAVCO
PCM
PELOX
PENTRE S.A.

Table 528 - continued

Company
PETROFER
Petrus Chemicals
Pioneer Metal Finishing
pipelineqatar.com
Plazma K
Podium Química
Pouyab Felez
PPG
Pragochema spol. s r.o.
Proquimia
PT Atap Chemical Indonesia
PT Crystal Clear Chemicals
PT. Haschemindo
PT. Hesindo Sumber Kimia
PT. Sinar Cemaramas Abadi
PT. Surya Langgeng Indonesia
PT. Trimega Inti Selaras
Qingfeng Enterprise Co., Ltd.
Qnity Electronics, Inc.
Quaker Houghton
Qualichem
QUALICHEM, INC.
Quimatic
Quimetal Pemder
Quimicamp del Ecuador S.A.
Química Integral de México, S.A. de C.V.
Química Rodran
Química Sigma
RBP Chemical Technology, Inc.
REFA Chemical Industry
Rhein Chemicals Private Limited
RIO Middle East

Table 528 - continued

Company
Ronatec C2C, Inc.
Röhsler & Co KG
S.A.V. ARGENTINA S.R.L.
S.T. Rizing Co., Ltd.
Safic-Alcan
Sanchem, Inc.
Sanko Shokai Co., Ltd.
Saphonyx
Seacole
Selleys Trading
Senchemical
ShinPoong Metal
Silmid
Silver Electro Plating
Simika Productos Químicos
So Clean Solutions
Socomore
Sparks Chemicals
Spartan de Argentina Productos Químicos S.A.
St Kilda Industrial Supplies
Stellar Solutions
STRM
Sudarshan Chemical Industries Limited
SUGEST
Surface Chemical Technology India Private Limited
Surface Technology UK
Surface Technology, Inc.
Surventis
Suyog Metalix
Syncoat Chemicals (2017) Ltd.
TANAKA PRECIOUS METAL GROUP Co., Ltd.
Technic Inc.

Table 528 - continued

Company
Thai Kelly Corp., Ltd.
TNH Kimya
Top Chem SRL
Troy Chemical Industries
U.S. Specialty Color Corporation
Umicore
Univertical
Vanaden Group
VarTek Kimya
Vatan Kimya Metal
Vecom Group
VF Chemical, C.A.
voestalpine Böhler Welding
WestChem Technologies
Wuhan Aobang Biaomian Jishu Youxian Gongsi
Wuhan Fengfan Electrochemical Technology Co., Ltd.
Yıldızlar Kimya Yüzey İşlem Teknolojileri A.Ş.
YMT Co., Ltd.
YUKEN INDUSTRY CO., LTD.
Zarfan
Zavenir Daubert
Zenco Systems Ltd
ZF Corporation
Zinex Corporation

Sources & Evidence

1. Less energy, more efficiency: Henkel optimizes aluminum anodizing with new additive Bonderite M-AD 2000A
   - Company verification: Henkel's August xx.xx 2025 announcement identifies BONDERITE M-AD 2000A as a commercially available aluminum-anodizing additive in Europe.
   - Company verification: The announcement establishes continuing commercial activity in Henkel's surface-treatment business.

2. MKS Inc. - FY2025 Form 10-K, filed February 24, 2026
   - Company verification: MKS Inc.'s FY2025 Form xx.xx-K establishes the current corporate reporting identity and ownership of the acquired Atotech business.
   - Company verification: The Materials Solutions Division supplies specialty chemistry for surface modification, plating, surface finishing and corrosion resistance.
   - Company verification: The filing reports continuing chemistry sales activity separately from its descriptions of equipment and other businesses.
3. News & Media | Element Solutions Inc
   - Company verification: Element Solutions' official news page records an October xx.xx 2026 announcement concerning its third-quarter earnings release.
   - Company verification: The page records mutual termination of the Solstice merger agreement on August xx.xx 2026; the contemplated merger is not treated as completed.
4. SurTec in the USA
   - Company verification: SurTec's U.S. business page identifies SurTec as a business unit of Freudenberg Chemical Specialities, wholly owned by Freudenberg SE.
   - Company verification: The page advertises named pretreatment, passivation and electroplating products and identifies SurTec, Inc. in Brunswick, Ohio.
   - Company verification: It describes an international subsidiary and partner network specific to the surface-finishing business.
5. PPG Industries, Inc. - 2025 Annual Report and Form 10-K
   - Company verification: PPG's FY2025 Form xx.xx-K establishes PPG Industries, Inc. as the corporate reporting entity.
   - Company verification: The Industrial Coatings business supplies metal pretreatment products.
   - Company verification: The filing identifies global production and sales for the business containing those products; it does not separately quantify pretreatment sales.
6. Nihon Parkerizing Co., Ltd. - Integrated Report 2025
   - Company verification: Nihon Parkerizing's Integrated Report 2025 establishes the corporate reporting identity and continuing international surface-treatment business.
   - Company verification: The report identifies regional chemical-business activity and group operating relationships.
   - Company verification: Nihon Parkerizing's report lists Parker Corporation among its Japan-based group businesses.
   - Company verification: That listing requires relationship-specific reconciliation before Parker Corporation's activity is attributed to the Nihon Parkerizing reporting perimeter.
7. Nippon Paint Holdings Co., Ltd. - FY2026 1Q Financial Results Presentation Material
   - Company verification: The May xx.xx 2026 financial-results presentation establishes continuing operations under Nippon Paint Holdings Co., Ltd.
   - Company verification: The issuer's current reporting identity complements the captured group-level surface-treatment portfolio and subsidiary attribution.
8. JCU Corporation - Financial Results Briefing Material for the Fiscal Year Ended March 2026
   - Company verification: JCU's FY3/xx.xx results presentation establishes continuing commercial sales of surface-treatment chemicals.
   - Company verification: It distinguishes chemicals from machinery and identifies chemical-business activity in China, Taiwan and South Korea.
   - Company verification: The presentation reports plating and etching chemical product categories serving electronics and industrial applications.

9. C. Uyemura & Co., Ltd. - Consolidated Financial Results for the Fiscal Year Ended March 31, 2026
   - Company verification: Uyemura's fiscal-year-ended-March-2026 financial results establish continuing surface-finishing-materials sales.
   - Company verification: The filing distinguishes surface-treatment materials from machinery, plating services and real-estate activity.
   - Company verification: It reports materials-business activity across Japan, Taiwan, China, Korea, Singapore, Thailand and North America.
10. Company Information | C. Uyemura & Co., Ltd.
   - Company verification: Uyemura's official profile identifies C.Uyemura & Co., Ltd., its Osaka headquarters and Tokyo Stock Exchange listing.
   - Company verification: The profile contains March xx.xx 2026 corporate information and identifies manufacturing and distribution of plating chemicals.
11. Columbia Chemical - Company Information
   - Company verification: Columbia Chemical describes its employee ownership through an ESOP.
   - Company verification: Its company page identifies direct sales, distributors and joint-venture channels for plating chemistry in North America and internationally.
12. Columbia Chemical - Latest News & Press Releases
   - Company verification: Columbia Chemical's official news page records a May xx.xx 2026 commercial collaboration with Yuken Group serving the U.S. market.
   - Company verification: The record establishes recent surface-finishing-business activity, not an ownership transaction.
   - Company verification: The May xx.xx 2026 announcement identifies Yuken Industry Co., Ltd. and YUKEN America, Inc. in a commercial collaboration with Columbia Chemical.
   - Company verification: The announcement corroborates continuing U.S.-market commercial activity for the Yuken group.
13. Hubbard-Hall appointed Aaron Mambrino as Chief Operating Officer and Executive Vice President of the Company
   - Company verification: Hubbard-Hall's executive-appointment announcement describes sixth-generation family leadership under Kellogg.
   - Company verification: It identifies the company's chemical-distribution business and Women Owned Small Business certification, complementing the captured proprietary finishing-chemistry and acquisition records.
14. Qnity Electronics, Inc. - FY2025 Form 10-K, filed February 26, 2026
   - Company verification: Qnity's FY2025 Form xx.xx-K confirms completion of its separation from DuPont on November xx.xx 2025.
   - Company verification: Qnity became an independent publicly traded company and began regular-way NYSE trading on November xx.xx 2025.
   - Company verification: Its Advanced Circuit and Packaging business supplies electroless and electrolytic plating chemistry and final-finishing solutions.
15. EEJA Ltd. | Group Companies | About Us | TANAKA
   - Company verification: TANAKA's EEJA company record identifies development, manufacture, sales and export of precious-metal and base-metal plating solutions.
   - Company verification: The record establishes EEJA's market-facing operating role within TANAKA and describes its historical joint-venture origin without treating that origin as current ownership.
16. Haviland USA | News
   - Company verification: Haviland's official news page records a shareholders' meeting in 2026.
   - Company verification: The dated company event corroborates continuing operations alongside the captured employee-ownership and surface-finishing portfolio records.

17. Schlötter - Company - Innovation combined with success
    - Company verification: Schlötter's official company profile identifies the current fourth-generation family-run Dr.-Ing. Max Schlötter GmbH & Co. KG business.
    - Company verification: It describes international commercial presence and proprietary finishing chemistry for industrial, plastics and electronics applications.
    - Company verification: Identifies Dr.-Ing. Max Schlötter GmbH & Co. KG as a fourth-generation family-run company.
    - Company verification: Describes proprietary chemical products for general metal finishing, corrosion-resistant and decorative finishing, plastics, electronics, and printed circuit boards.
    - Company verification: Identifies the chemical business and Geislingen headquarters in Germany.
18. DLA Qualified Products Database - manufacturer listing 41268893
    - Company verification: The DLA qualified-products record identifies SOCOMORE at Elven, France as a manufacturer for SOCOSURF TCS COLORED RTU.
    - Company verification: The displayed record reports active SAM status, no stop-ship restriction and a May xx.xx 2025 qualification reference.
    - Company verification: This establishes the stated public qualification and manufacturer identity, not independently assessed efficacy or worldwide availability.
    - Company verification: The refreshed DLA record identifies SOCOMORE in Elven, France as manufacturer of SOCOSURF TCS COLORED RTU, with active SAM status and no displayed stop-ship restriction. ([qpldocs.dla.mil](https://qpldocs.dla.mil/search/print_govt_mfg.aspx?govt=xx.xx))
    - Company verification: The same DLA record identifies SurTec International GmbH and SurTec operating plants against named surface-treatment products.
    - Company verification: The displayed SurTec records report active SAM status and no stop-ship restriction.
    - Company verification: The inspected DLA record identifies CHEMEON Surface Technology, LLC as manufacturer of named CHEMEON treatment products, including CHEMEON ETCP TOUCH UP PEN. The displayed dataset was updated September xx.xx 2026. ([qpldocs.dla.mil](https://qpldocs.dla.mil/search/print_govt_mfg.aspx?govt=xx.xx))
    - Company verification: The same DLA record identifies QUALICHEM, INC. in Salem, Virginia as a plant associated with named CHEMEON products. The listing establishes the stated plant role, not ownership of CHEMEON or independent product-brand ownership. ([qpldocs.dla.mil](https://qpldocs.dla.mil/search/print_govt_mfg.aspx?govt=xx.xx))
19. Socomore Brasil - Produtos
    - Company verification: Socomore's Brazil-facing commercial catalog advertises SOCOSURF A1858/A1806 and SOCOSURF TCS/PACS aluminum-treatment products.
    - Company verification: The catalog also advertises named paint-stripping products, improving direct portfolio support without establishing the ultimate group control chain.
20. Asterion is Now Part of DuBois Chemicals
    - Company verification: DuBois announced acquisition of Asterion, LLC on December xx.xx 2020.
    - Company verification: The same official page contains a March xx.xx 2025 transition notice directing Asterion customer communications to DuBois.
    - Company verification: These records establish a reporting-level overlap with the separately staged Asterion identity.
    - Company verification: Asterion, LLC was acquired by DuBois in the transaction announced December xx.xx 2020.
    - Company verification: A March xx.xx 2025 customer-transition notice corroborates continuing integration into DuBois rather than an independently reportable supplier assumption.
21. 广东光华科技股份有限公司 - 2024 年年度报告
    - Company verification: The statutory 2024 annual report establishes Guangdong Guanghua's native-language legal issuer identity.
    - Company verification: The report was issued in April 2025; it does not by itself establish ownership continuity through October 2026.

22. Corporate Profile | Corporate Information | Ishihara Chemical Co., Ltd.
- Company verification: Ishihara Chemical's official corporate profile identifies its plating-chemicals business and tin/solder plating additives.
- Company verification: The profile distinguishes those offerings from automotive aftermarket chemicals and other materials.

23. Okuno will exhibit at Photonics-Electronics Convergence World in NEPCON JAPAN [Autumn]
- Company verification: Okuno's August xx.xx 2026 business announcement identifies TOP LUCINA GCS and TORYZA LCN FRV plating-additive offerings.
- Company verification: The announcement establishes recent commercial promotion of surface-finishing chemistry for electronic substrates.

24. BONDERITE® - Henkel Adhesives
- Company verification: Henkel markets the BONDERITE surface-treatment portfolio, including conversion coatings, passivation and anodizing-related treatment products.

25. Surventis launches as an independent global leader in automotive coatings and surface treatment
- Company verification: The July xx.xx 2026 announcement identifies Surventis as the independent successor to BASF Coatings and includes Chemetall in its coatings and surface-treatment portfolio.
- Company verification: The announcement identifies Carlyle-managed funds, in partnership with Qatar Investment Authority, as majority owners and BASF as a minority shareholder.

26. BASF and Carlyle complete coatings transaction
- Company verification: BASF confirms that the coatings transaction closed on June xx.xx 2026 and that Surventis includes the former automotive coatings and surface-treatment businesses.

27. MKS Instruments Announces Change of Corporate Name to MKS Inc.
- Company verification: The official corporate-name announcement establishes MKS Inc. as the name effective May xx.xx 2025 and identifies Atotech among its acquired businesses.

28. General Metal Finishing - Atotech
- Company verification: MKS' Atotech markets general-metal-finishing solutions for industrial plating and surface treatment.
- Company verification: The business page lists chemistry-production and sales operations in multiple countries, including Canada, China, Germany, India and South Korea, and a sales operation in Spain.

29. Our History | Element Solutions Inc (ESI)
- Company verification: Element Solutions' corporate history identifies MacDermid and Enthone metal-finishing businesses and records the acquisition of Coventya in 2021.
- Company verification: The history establishes Platform Specialty Products as the company's previous name.

30. Element Solutions Inc Announces Closing of Coventya Acquisition
- Company verification: Element Solutions announced the completed acquisition of Coventya on September xx.xx 2021 and described it as a provider of specialty chemicals for surface finishing.
- Company verification: The acquired business joined MacDermid Enthone Industrial Solutions.

31. Contact Us | Element Solutions Inc (ESI)
- Company verification: Element Solutions' current business contact page identifies MacDermid Enthone Industrial Solutions as its surface-finishing chemicals and solutions business.

32. About SurTec
- Company verification: SurTec develops, manufactures and supplies chemical specialties for industrial parts cleaning, metal pretreatment, functional coatings and electroplating.
- Company verification: SurTec identifies itself as a business unit within Freudenberg Chemical Specialities, wholly owned by Freudenberg SE.
- Company verification: The company page identifies international subsidiaries and its Valinhos, Brazil production-site history.

33. Industrial Pretreatment Products
    - Company verification: PPG offers metal pretreatment products including cleaners, phosphate treatments and thin-film treatments.
    - Company verification: The portfolio targets applications including appliances, consumer electronics and industrial equipment.
34. Quaker Houghton Completes its Acquisition of Dipsol Chemicals and Announces its acquisition of Natech, Ltd.
    - Company verification: Quaker Houghton announced completion of its Dipsol Chemicals acquisition on April xx.xx 2025.
    - Company verification: Dipsol supplies surface-treatment and plating solutions and services for automotive and other industrial applications and operates internationally.
35. Surface Treatment Chemicals | Surface Treatment by Nihon Parkerizing
    - Company verification: Nihon Parkerizing supplies surface-treatment chemicals for substrate cleaning, corrosion resistance, paint-base preparation and other industrial surface functions.
    - Company verification: Its business page reports a renewed aerospace surface-treatment technology license relationship with Henkel.
    - Company verification: Nihon Parkerizing's official business page identifies Henkel AG & Co. KGaA as its aerospace surface-treatment technology licensing partner.
36. Surface treatments | NIPPON PAINT HOLDINGS CO.,LTD.
    - Company verification: Nippon Paint Holdings identifies surface pretreatment and functional surface coatings as group businesses delivered through Nippon Paint Surf Chemicals.
    - Company verification: The portfolio addresses automotive, general industrial and beverage-can applications and describes an international supply and support network.
37. Products - JCU CORPORATION
    - Company verification: JCU develops, manufactures and sells chemicals for electronics and for decorative and rust-proof treatment of automotive parts, faucet parts and construction materials.
    - Company verification: Its portfolio distinguishes the chemicals business from surface-treatment equipment.
38. Products | OKUNO CHEMICAL INDUSTRIES CO., LTD.
    - Company verification: Okuno Chemical Industries offers surface-treatment chemicals for electronic substrates, aluminum and plastics.
    - Company verification: Its metal-finishing portfolio includes anodizing-related chemistry, corrosion-resistant plating and other plating applications.
39. Industrial Finishing Chemistry & Equipment | Technic Inc.
    - Company verification: Technic supplies industrial pretreatment, electrolytic plating, electroless-nickel plating, immersion finishing and post-treatment chemistry.
40. About Technic Global Facilities | Technic Inc.
    - Company verification: Technic identifies facilities in North America, Asia and Europe and describes precious-metal electroplating and printed-wiring-board chemical offerings.
41. SOCOMORE SOCOSURF Surface Treatment Process | Silmid
    - Company verification: Silmid's commercial page publicly markets SOCOMORE-branded SOCOSURF surface-treatment solutions, providing channel corroboration of the branded offering.
    - Company verification: Silmid advertises SOCOMORE SOCOSURF surface-treatment products as a commercial channel offering.
42. Introducing our Business Unit Surface Treatment | Blog | News | Kluthe
    - Company verification: Kluthe's July xx.xx 2024 business announcement identifies a globally operating surface-treatment unit.
    - Company verification: The unit markets DECORRDAL pretreatment products for steel, galvanized steel and aluminum.

43. Columbia Chemical - Surface Finishing Product Overview
    - Company verification: Columbia Chemical's surface-finishing product overview offers pretreatment products and plating-related chemical products.
    - Company verification: The portfolio also identifies aluminum surface-treatment offerings.
44. Hubbard-Hall Acquires Assets of JSA/Metalline
    - Company verification: Hubbard-Hall's December xx.xx 2025 acquisition announcement establishes its proprietary chemistry and distribution role in plating and general metal finishing.
    - Company verification: The announcement identifies expanded Midwest sales coverage through acquired JSA/Metalline assets.
    - Company verification: Hubbard-Hall identifies PAVCO plating specialties among the products it commercially supports and distributes.
    - Company verification: Hubbard-Hall identifies MetalChem's electroless-nickel product line among its commercially supported offerings.
45. Metal Finishing - Manufacturing
    - Company verification: DuBois Chemicals offers metal cleaners, aluminum finishing, black-oxide finishing, conversion coatings, electroless-nickel chemistry, zinc-plating additives and paint pretreatment products.
    - Company verification: Its stated buyers include OEMs, coaters and contract manufacturers.
46. Pickling | FUCHS LUBRICANTES, S.A.U.
    - Company verification: FUCHS's Spain-localized steel-industry catalog markets surface-treatment products for pickling, including the RENOCLEAN FDO xx.xx inhibitor.
47. Product Information | JAPAN PURE CHEMICAL
    - Company verification: Japan Pure Chemical's product portfolio offers functional precious-metal plating chemicals, including named JPC product families.
48. JPC's Business and Electronic Components | JAPAN PURE CHEMICAL
    - Company verification: Japan Pure Chemical identifies development, manufacture and sale of noble-metal plating chemicals as its main business.
    - Company verification: The chemicals serve contacts and connection points in printed circuit boards, connectors and lead frames.
49. Plating Chemicals | Our Businesses | ISHIHARA CHEMICAL CO.,LTD
    - Company verification: Ishihara Chemical markets metal surface-finishing agents and plating chemicals for electronic components.
50. Semiconductor Packaging Materials
    - Company verification: Qnity offers electroplating materials for semiconductor packaging, including copper plating, under-bump metallization and the SOLDERON BP plating family.
    - Company verification: The commercial portfolio distinguishes plating materials from other packaging materials.
51. SEMICON Taiwan 2026
    - Company verification: The official SEMICON Taiwan 2026 directory lists YMT's Taiwan branch and reproduces its company description of specialty chemicals for surface treatment of flexible boards, rigid-flex boards and IC substrates.
    - Company verification: The exhibitor profile identifies a Korea-linked business and describes regional branches and subsidiaries.
52. Company Profiles_Guangzhou Sanfu New Materials Technology Co., Ltd
    - Company verification: Guangzhou Sanfu New Materials Technology Co., Ltd. identifies itself as a surface-finishing technology supplier developing, producing and selling specialty surface-finishing chemicals.
    - Company verification: Its stated commercial applications include PCB manufacturing, automotive parts, hardware and sanitary ware.

53. Precious Metal Compounds & Coatings for Electroplating
    - Company verification: Heraeus Precious Metals markets precious-metal compounds and solutions specifically for electroplating companies and electrolyte manufacturers.
    - Company verification: Its commercial application categories include electronics, automotive, jewelry and aerospace.
54. Group Companies | About Us | TANAKA
    - Company verification: TANAKA's group listing identifies EEJA and Metalor as wholly owned businesses within its precious-metal technologies structure.
    - Company verification: EEJA develops, manufactures and sells precious-metal and base-metal plating solutions; Metalor produces and sells plating solutions and equipment.
55. History | About Us | TANAKA
    - Company verification: TANAKA's corporate history identifies the 2025 transition to a management structure centered on TANAKA PRECIOUS METAL GROUP Co., Ltd.
    - Company verification: The history documents current group-company name changes and Metalor's entry into the group.
56. Plating - METALOR
    - Company verification: Metalor's commercial portfolio offers electrolytic and electroless precious-metal plating products for electronics, semiconductor and decorative applications.
    - Company verification: The offering includes process chemistry and related commercial services.
57. GALVANIZING 2.0
    - Company verification: DÖRKEN Coatings markets DELTA-PROZINC products covering pretreatment, zinc plating, passivation and sealing.
    - Company verification: The same business page separately identifies DELTA-PROTEKT zinc-flake coatings.
58. Business Model | Value Creation | CSR | NOF CORPORATION
    - Company verification: NOF's official business material identifies its GEOMET zinc-flake anti-corrosion treatment product and NOF Metal Coatings business.
    - Company verification: The stated commercial applications include automotive parts and wind-power components.
59. METALLIZATION - Insulectro
    - Company verification: Insulectro offers a commercial line of Qnity metallization products, including COPPER GLEAM and ELECTROPOSIT branded plating products.
    - Company verification: Insulectro's commercial catalog provides independent channel corroboration for Qnity-branded metallization offerings.
60. Services 1 - Bulk Chemicals Inc
    - Company verification: Markets E-CLPS, ZIRCA-SIL, TRI-CLPS, Bulk Kleen, Bulk Rinse, and other industrial metal-pretreatment products.
    - Company verification: Identifies Bulk Chemicals, Inc. and its Reading, Pennsylvania contact location.
61. Distributors - Bulk Chemicals Inc
    - Company verification: Describes BCI's distributor/licensee network and Pennsylvania headquarters and manufacturing.
    - Company verification: Lists BCI Surface Technologies Mexico as a Mexican channel; ownership and current sales are not established.
    - Company verification: Lists Chemco Products Company in Paramount, California within BCI's distribution network.
    - Company verification: Lists WestChem Technologies, Inc. within BCI's North American distribution network.
62. Mason Wells Acquires Calvary Industries - Mason Wells, Inc
    - Company verification: Mason Wells announced its completed acquisition of Calvary Industries on August xx.xx 2025.
    - Company verification: Describes metal-pretreatment chemistry, manufacturing in Ohio and Louisiana, and third-party distribution in California and Mexico.

63. Haviland USA | About
- Company verification: Identifies Haviland Enterprises, Inc., its Grand Rapids, Michigan origin, and employee ownership.
- Company verification: Places Haviland Products Company's surface-finishing business within the enterprise.

64. Haviland USA | Surface Finishing
- Company verification: Advertises pretreatment, plating, conversion-coating, and post-treatment chemistries.
- Company verification: Lists phosphate, black-oxide, electroless-nickel, aluminum-treatment, and other finishing categories.

65. About EPi | Electrochemical Products, Inc
- Company verification: Identifies Electrochemical Products, Inc. and its New Berlin, Wisconsin business contact.
- Company verification: Offers E-Brite plating products, E-PASSivate treatments, E-Kleen cleaners, and metal-blackening products.

66. About Birchwood Technologies
- Company verification: Advertises Birchwood Technologies metal-finishing, cleaner, preparation, and rust-preventive offerings.
- Company verification: Identifies Birchwood Laboratories LLC at Eden Prairie, Minnesota.

67. About RBP Chemical Technology | RBP Chemical Technology
- Company verification: Identifies RBP Chemical Technology Inc. as a supplier of proprietary chemicals for medical, printing, and electronics customers.
- Company verification: Reports surface-chemistry manufacture and distribution from Milwaukee, Wisconsin and sales/service in North America.

68. Medical Implant Device Chemicals | RBP Chemical Technology
- Company verification: Advertises surface-chemistry solutions for cleaning and passivation of medical-device metal surfaces.
- Company verification: Separates this commercial chemical offering from claims of device authorization or clinical efficacy.

69. About Us - Syncoat - Manufacturer of washes, coatings, and primers
- Company verification: Identifies Syncoat Chemicals (2017) Ltd. as a Canadian family-owned manufacturer of metal-finishing products and coatings.
- Company verification: Reports the 2017 ownership/name transition and relocation to Brantford, Ontario in 2019.

70. About Us - Dynamix
- Company verification: Identifies Dynamix Inc. as a Canadian-owned manufacturer and supplier of surface-finishing chemistry serving North America.
- Company verification: Lists Canadian Finishing Systems as a distributor in Burlington, Ontario.
- Company verification: Lists BNAC Environmental Solutions Inc. as a distributor in Coquitlam, British Columbia.
- Company verification: Lists Ionic Solutions as a distributor with Missouri and Indiana contacts.
- Company verification: Lists Zinex Corporation as a distributor in Oxnard, California.

71. Products - Dynamix
- Company verification: Publicly catalogs DYNAPLATE CLZ, electroless-nickel products, and other named finishing chemistries.

72. General Metal Finishing - WestChem Technologies
- Company verification: Markets pretreatment, phosphate-treatment, rust-removal, pickling, and passivation chemical categories.
- Company verification: States that local warehousing and commercial support are available in Western Canada.

73. ACERCA DE NOSOTROS | Quimetal
    - Company verification: Identifies Quimetal's operating history beginning in 1985.
    - Company verification: Reports alliances with EPI and Floking beginning in 2000 and Dipsol México beginning in 2010; these are not ownership evidence.
74. PRODUCTOS | Quimetal
    - Company verification: Publicly offers industrial degreasing and related finishing-chemical product categories.
    - Company verification: Provides a commercial quotation route for the advertised portfolio.
75. Empresa | EP Insumos
    - Company verification: Describes a Mexican business serving electroplating, galvanizing, and coil-coating customers through chemical and other operating units.
76. Planta Químicos | EP Insumos
    - Company verification: Identifies Electrochemical Plating and a chemical business in Cuautitlán Izcalli, State of Mexico.
    - Company verification: Advertises plating additives, conversion-treatment, cleaning, and stripping categories, including proprietary and distributed products.
77. Magnesium Pretreatment Painting | Sanchem, Inc.
    - Company verification: Markets SafeGard magnesium conversion-treatment and final-seal products.
    - Company verification: Identifies Sanchem, Inc. at its Chicago, Illinois contact address.
78. About Us: Our History, Mission, and Values - Hawkins
    - Company verification: Identifies Hawkins, Inc., its Roseville, Minnesota headquarters, and United States facilities.
    - Company verification: Describes the company's manufacturing, blending, and distribution roles without attributing all activities to surface treatment.
79. Surface Finishing Products Supplier & Distributor - Hawkins
    - Company verification: Offers surface-finishing chemicals through an Upper Midwest supplier/distributor business.
    - Company verification: Lists proprietary plating additives, electroless nickel, conversion coatings, and anodizing-related products.
80. About Us - Circle-Prosco, Inc.
    - Company verification: Provides the official Circle-Prosco, Inc. business identity and company description.
81. Steelcote™ - Circle-Prosco, Inc.
    - Company verification: Advertises Steelcote branded zirconium-pretreatment chemistry through Circle-Prosco.
82. Markets Served - Seacole
    - Company verification: Markets cleaning, pretreatment, plating, anodizing, and plating-on-plastic chemistries.
    - Company verification: Also advertises PCB etchants and associated surface-processing chemical categories.
83. Azelis and Chemetall expand strategic distribution agreement for surface treatment market in Canada | Azelis
    - Company verification: On April xx.xx 2026, announced an expanded agreement to distribute Chemetall surface-treatment products for general industrial applications throughout Canada.
    - Company verification: Establishes a Canadian distribution relationship for the Chemetall business before the captured June xx.xx 2026 ownership transaction.
    - Company verification: Does not independently establish the post-transaction holding-company identity or current attributed sales.
84. Our Journey with Troy Chemical - Troy Chemical
    - Company verification: A September xx.xx 2024 company announcement states that Ted and Beth Bunton purchased Troy Chemical Industries in 2020.
    - Company verification: Describes the company's metal-pretreatment business and provides its Burton, Ohio contact address.

85. Company History - Surface technology
- Company verification: Identifies Surface Technology, Inc. and its Ewing, New Jersey headquarters.
- Company verification: Documents the commercial One-Plate chemistry business separately from coating-application services.

86. Surface Technology Designed One-Plate Plating Bath Chemistry
- Company verification: Attributes the marketed One-Plate electroless-nickel chemistry offering and trademarks to Surface Technology, Inc., Ewing, New Jersey.

87. About Us - Luster-On Products Inc.
- Company verification: Identifies Luster-On Products Inc. as a manufacturer of surface-preparation and metal-finishing chemistry.
- Company verification: Describes plating and post-treatment offerings for industrial customers, separately from equipment.

88. Químicos para Ayudas de Proceso | ADHITEC
- Company verification: Advertises Mexicryl TX-xx.xx as a surface modifier for adhesion and painting-related preparation of plastic components.
- Company verification: Identifies ADHITEC as a Mexican chemical manufacturer with an Ecatepec, State of Mexico address.

89. Atotech México - Líder en galvanoplastia y tratamiento de superficies - Atotech
- Company verification: Identifies Atotech de México S.A. de C.V. and the MKS Atotech business.
- Company verification: Advertises electronics and industrial finishing chemistry, including pretreatment and stripping, through the Mexican business.

90. Mexico | America | Global | Kluthe
- Company verification: Identifies Kluthe de Mexico S. de RL de CV at Huejotzingo, Puebla.
- Company verification: Connects the local business to Chemische Werke Kluthe GmbH's pretreatment and other industrial chemical offerings.
- Company verification: The address does not independently establish Mexican manufacture or product-specific sales.

91. Sobre a BIG CROMO | Soluções Química Industrial desde 1991
- Company verification: The company page identifies BIG CROMO IND E COM IMP E EXP LTDA. and its Cotia, São Paulo location.
- Company verification: BIG CROMO states that it develops, manufactures, and supplies specialty chemicals for metal pretreatment and electroplating, with Brazilian distribution.

92. Pré-tratamento de Metais | Soluções Químicas para Preparação de Superfícies - Big Cromo
- Company verification: The specific pretreatment page markets phosphate conversion products, pickling products, passivators, and sealants.
- Company verification: The page distinguishes these chemical offerings from general industrial cleaning and mechanical finishing accessories.

93. Produtos para Galvanoplastia e Aditivos | Podium Química
- Company verification: Podium's catalog offers named plating products including Cu-HS xx.xx and Cobre Pro xx.xx.
- Company verification: The catalog identifies Podium Produtos Químicos, its Loanda, Paraná address, and service to the Brazilian market.

94. A Klintex - Klintex
- Company verification: The company page identifies Klintex Insumos Industriais Ltda. in Cachoeirinha, Rio Grande do Sul.
- Company verification: Klintex describes manufacture and commercialization of metal pretreatment chemicals, including the Nanotex ZR product family.
- Company verification: The page describes Aquafil and Tecnoil as acquired businesses rather than separate independent participants.

95. Tratamento de Superfícies Metálicas | Limpeza e Desoxidação | Quimatic
    - Company verification: Quimatic's surface-treatment portfolio includes Quimatic Limpa-Inox and products for metal cleaning, rust removal, and surface preparation.
    - Company verification: Limpa-Inox is publicly classified as a chemical product associated with restoration of stainless steel's protective passive surface.
96. Quem somos - Quimatic
    - Company verification: Quimatic's company history connects the current brand with Tapmatic do Brasil.
    - Company verification: The history records creation of the Quimatic brand in 1991 and consolidation of its current brand identity in 2024.
97. Química Sigma: Tratamiento de Superficies
    - Company verification: Química Sigma states that it develops, manufactures, and commercializes chemicals for metallic surface treatment.
    - Company verification: The portfolio lists phosphate treatments, zirconium-based conversion treatments, degreasers, and aluminum passivation products.
98. Química Sigma, información institucional.
    - Company verification: Sigma identifies itself as an Argentine industrial company.
    - Company verification: Its institutional page identifies commercial representation in Paraguay, Uruguay, and Peru.
99. C & V INDUSTRIAS - Fabricación de productos para tratamiento de superficies
    - Company verification: C & V Industrias states that it manufactures surface-preparation products under Química Sigma's license.
    - Company verification: Its named offerings include Sigmaclean xx.xx Sigmadex xx.xx Sigmafos xx.xx and Sigmasel BDA.
    - Company verification: The page lists a commercial address in Los Olivos, Lima, Peru.
    - Company verification: C & V identifies Química Sigma as its licensing partner for the listed metal pretreatment products.
100. Químicos para Galvanizado - Sitio Oficial Dosakin Ltda.
    - Company verification: Dosakin offers conversion pretreatment, pickling, and passivation-related products for galvanized metal surfaces.
    - Company verification: The page identifies Dosakin Ltda. and lists commercial contact locations in Bogotá, Colombia, and Quito, Ecuador.
101. Catalogo quimicos v1
    - Company verification: BYCSA describes chemical manufacturing for Colombia's metalworking industry and lists a Medellín commercial location.
    - Company verification: The catalog offers surface-preparation and plating-related products, including PULIBRILL xx.xx-I, KLEANEX KS xx.xx/LE, CUPRACID xx.xx and STANYOL xx.xx.
102. Tratamiento de superficies metálicas - Fosfamet
    - Company verification: Fosfamet's specific surface-treatment catalog offers Nanoconver, Granofos, Alumprep, and Ecoseal product families.
    - Company verification: The advertised categories include conversion treatment, phosphate treatment, aluminum treatment, and passivation.
103. Productos
    - Company verification: Arazul's catalog offers chemicals specifically classified for aluminum anodizing and pre-paint treatment.
    - Company verification: It also advertises pickling, phosphating, passivation, and paint-removal products for ferrous surfaces.
104. Matilde Pacheco de Batlle 3961 - Montevideo, Uruguay
    - Company verification: Arazul's location page identifies its Montevideo, Uruguay address.

105. Empresa - ITONOR S.A
    - Company verification: ITONOR reports historical production under license from Argentina's Industrias Químicas CAR-LA, identified as currently PENTRE S.A.
    - Company verification: Its history records addition of Henkel Surface Technologies representation in 1998.
    - Company verification: ITONOR identifies PENTRE S.A. as the current name associated with its historical Argentine licensing counterpart CAR-LA.
106. Catálogo de productos químicos industriales | VF Chemical
    - Company verification: The catalog advertises DEOX55 as a desoxidizing and phosphating chemical product.
    - Company verification: It identifies VF Chemical, C.A., RIF J-xx.xx-xx.xx and operations in La Victoria, Aragua, with dispatch across Venezuela.
107. Tratamiento Metalúrgico para Preparación de Metales, Ecochemic
    - Company verification: Ecochemic's dedicated metal-treatment page offers phosphating and rust-removal preparation for metal surfaces before painting.
    - Company verification: The commercial page provides contact information in Santo Domingo, Heredia, Costa Rica.
108. Nosotros - Chemtec Latin America
    - Company verification: Chemtec Latin America identifies Chemtec Srl as its parent.
    - Company verification: The page describes regional production and sale of chemicals for surface preparation before painting and provides a Florida contact address.
    - Company verification: The record does not identify actual sales in individual Latin American countries.
109. Datos del proveedor "ALPHA QUIMICA S.A."
    - Company verification: Paraguay's official supplier registry identifies ALPHA QUIMICA S.A., RUC xx.xx-xx.xx in Asunción.
    - Company verification: The registry records supplier activation on August xx.xx 2025.
    - Company verification: This record establishes identity and registration, not a surface-treatment product offering.
110. Scaleva® Ácido Metano Sulfónico | Arkema Argentina
    - Company verification: Arkema's Argentina-localized product portfolio markets methanesulfonic-acid specialty grades, including E-Pure MSA, and identifies electroplating among their commercial applications.
    - Company verification: The page provides an Argentina contact route.
    - Company verification: The record establishes a specialty-input role rather than a complete formulated surface-treatment system.
111. Central Química Argentina SA- Productos Químicos para la Industria
    - Company verification: Central Química Argentina's catalog offers branded zinc-plating additives, passivation products, metal degreasers, and stripping products.
    - Company verification: The page identifies Central Química Argentina and a Buenos Aires commercial address.
112. Productos - Ecotomer
    - Company verification: Ecotomer's product catalog includes an advertised Desincrustante Fosfatizante offering.
    - Company verification: The catalog lists a Villa Martelli, Buenos Aires, Argentina commercial address.
113. Productos y servicios para galvanoplastía | HTS S.R.L.
    - Company verification: HTS's company page identifies HTS S.R.L. as a provider of products and services for electroplating.
114. Unternehmen - Über 130 Jahre Galvanotechnik | DR. HESSE
    - Company verification: Identifies Dr. Hesse's German headquarters in Bielefeld and named foreign subsidiaries.
115. Passivierungen | DR. HESSE
    - Company verification: Publishes a commercial passivation-product portfolio under the Dr. Hesse business identity.

116. Über uns - KIESOW
    - Company verification: Describes development, manufacture, and sale of industrial degreasing products, electroplating chemistry, passivation systems, and phosphating products for powder-coating pretreatment.
117. About us - Alufinish
    - Company verification: Identifies Alufinish GmbH & Co. KG and its development, manufacture, and distribution of metal surface-treatment products.
    - Company verification: Identifies Andernach as the production location and describes aluminum and other-metal pretreatment activity.
118. Special Products & Accessories - Alufinish
    - Company verification: Advertises ENVIROX SG and Alfipas xx.xx within the metal-pretreatment portfolio.
    - Company verification: Distinguishes specialty treatment products, aftercare products, and private-label commercial services.
119. About Us - PMD Chemicals Ltd
    - Company verification: Describes PMD as a manufacturer and supplier of process chemistry for metal finishing, printed circuit boards, and electronics.
    - Company verification: Publishes commercial pretreatment, plating, passivation, and anodizing-related product categories.
120. P.M.D. CHEMICALS LIMITED overview - Find and update company information - GOV.UK
    - Company verification: Provides the official UK company record for P.M.D. CHEMICALS LIMITED, company number xx.xx.
121. Produits & matériels - CHIMIMECA
    - Company verification: Identifies Chimimeca SAS as a supplier of formulated metal-treatment chemicals.
    - Company verification: Advertises stainless-steel pickling and passivation products and treatment products for titanium, aluminum, and carbon steel.
122. About Us | Alit Technologies
    - Company verification: Identifies ALIT Technologies SpA and its chemical headquarters in San Bonifacio, Italy.
123. Chemical Paint Removers for Metal | Alit Tech
    - Company verification: Advertises METALSTRIP as ALIT's commercial metal paint-stripping chemical range.
124. CONDOROIL CHEMICAL SRL - La chimica sostenibile per l'industria
    - Company verification: Identifies Condoroil Chemical as an Italian manufacturer of surface-treatment chemicals established in 1972.
125. Chemicals for washing plants - Dollmar Meccanica S.r.l
    - Company verification: Attributes development and production of water-based detergents used in pretreatment equipment to Dollmar S.p.A.
    - Company verification: Describes a surface-treatment chemical range serving painting pretreatment and industrial parts cleaning.
126. Candor Sweden AB - Lotorp
    - Company verification: States that Candor has been part of Lotorp since 2014.
    - Company verification: Describes Candor's manufacture and sale of proprietary surface-treatment chemistry and subsidiaries in Finland and Denmark.
127. Candor Sweden - chemicals, metals and equipment for surface treatment.
    - Company verification: Identifies Lotorp as Candor's industrial owner.
    - Company verification: Describes Candor's Swedish headquarters and manufacture and supply of chemicals for surface treatment and electronics.
128. Tratamiento de superficies metálicas - Proquimia
    - Company verification: Advertises Proquimia products for phosphating, conversion pretreatment, aluminum treatment, galvanizing-related treatment, paint stripping, and metal degreasing.

129. Tratamiento Metal y Aluminio archivos - Cromogenia Units
    - Company verification: Publishes Cromogenia Units' commercial metal and aluminum treatment portfolio separately from its broader lubricant and industrial-material businesses.
130. Přípravky pro fosfátování - Pragochema
    - Company verification: Advertises named PRAGOFOS phosphating products under Pragochema's commercial product portfolio.
131. Galwanotechnika - Galvano-Partners Chemicals
    - Company verification: Advertises the Galvano-Partners Chemicals portfolio for anticorrosion finishing, decorative plating, electroless nickel, plastics metallization, and surface preparation.
    - Company verification: States that the business serves customers in Poland and other European countries.
132. deconex® MT 41: Passivation process reinterpreted
    - Company verification: Identifies Borer Chemie AG and deconex MT xx.xx as a commercial passivation offering.
133. Купить реактивы для гальваники по выгодной цене в Москве и РФ
    - Company verification: Publishes KhimNikel's commercial electroplating-reagent catalog.
    - Company verification: Lists an electroless-nickel offering specifically advertised for printed circuit boards.
134. НПП «СЭМ.М» - разработка химии для гальванических покрытий
    - Company verification: Publishes NPP SEM.M's company profile describing its electroplating-chemistry development business.
135. О компании - Химкрофф
    - Company verification: Publishes Khimkroff's company profile for an integrated electroplating business with chemical-material supply activity.
136. About us - AD International
    - Company verification: Describes AD International's metal surface-treatment chemistry business and toll-manufacturing role.
137. Surface treatment and cleaning of Mavom Chemicals
    - Company verification: States that Mavom Chemie produces chemical solutions and develops products for metal pretreatment and industrial cleaning.
    - Company verification: Identifies toll manufacturing and private-label activities separately from the broader distribution business.
138. Metal treatment products - Vecom Group
    - Company verification: Publishes Vecom Group's commercial product range for industrial metal surface treatment.
139. History | Poligrat Deutschland GmbH
    - Company verification: States that the owner-managed KSO Group acquired Poligrat's essential assets in 2019 and integrated Poligrat Deutschland GmbH.
    - Company verification: Describes Poligrat's chemical and electrochemical polishing and deburring business and the inclusion of Hungarian and British operations in the transaction.
140. Produits pour l'inox - Chimiderouil
    - Company verification: Advertises named stainless-steel treatment products under Chimiderouil, including GELINOX and FLUIDOX pickling ranges and CDR xx.xx passivation products.
141. PRODUITS - Saphonyx
    - Company verification: Publishes Saphonyx's commercial catalog with a metal-pretreatment product category alongside cleaning, coatings, specialties, and equipment.
142. Corozin
    - Company verification: Describes manufacture of phosphating and metal-treatment solutions.
    - Company verification: Provides Corozin's business address in Timisoara, Romania.
143. Produse de fosfatare | Blautech Industrial
    - Company verification: Advertises chemical-conversion products, including phosphating, phosphodegreasing, nanoceramic treatment, and passivation categories.

144. Produse și servicii - Top Chem SRL
    - Company verification: Advertises degreasing, stripping, phosphating, passivation, galvanizing-related, and aluminum-pretreatment offerings under Top Chem SRL.
145. Про компанію | Экол
    - Company verification: The company-profile page identifies Ekol as a developer and manufacturer of electroplating additives.
    - Company verification: Advertises named Ekol plating, passivation, and phosphating product families.
146. Henkel Beiz- und Elektropoliertechnik Betriebs GmbH
    - Company verification: Identifies Henkel Beiz- und Elektropoliertechnik Betriebs GmbH at an Austrian business address.
    - Company verification: Lists chemical pickling, chemical surface treatment, and electrochemical polishing services.
147. Chemical treatment pickling - Röhsler & Co
    - Company verification: Advertises commercial chemical cleaning and metal-surface pickling services.
    - Company verification: Identifies Röhsler & Co KG at Leopoldsdorf, Austria.
148. Surface Technology - Lenzing Technik
    - Company verification: Lists pickling, passivation, and electrochemical-polishing services at Lenzing Technik.
    - Company verification: Identifies Lenzing Aktiengesellschaft as the responsible company in Austria.
149. About Us | Surface Coatings Specialists for 80 Years
    - Company verification: Describes Anochrome Group's commercial surface-coating and metal-finishing service business.
    - Company verification: Identifies zinc-plating activity within the group's operating portfolio.
150. About us | Surface Technology UK
    - Company verification: Describes Surface Technology UK's component-surface coating service business and a multi-site UK operating footprint.
151. Process overview | Surface and heat treatments | Aalberts ST
    - Company verification: Publishes Aalberts surface technologies' commercial treatment portfolio, including anodizing and other surface-treatment services.
152. SurTec acquires chemical business from Italtecno in Italy
    - Company verification: The March xx.xx 2021 announcement states that SurTec acquired Italtecno's chemical business in Italy.
    - Company verification: Describes the acquired aluminum-alloy and steel surface-treatment chemical portfolio.
153. SurTec acquires Aluservice in Italy
    - Company verification: The December xx.xx 2023 announcement states that SurTec acquired Italy-based Aluservice.
    - Company verification: Describes Aluservice's chemical specialties for aluminum, zinc, steel, and iron surface treatment.
154. SurTec Expands Product Portfolio with Aluservice srl Offerings in Spain and Portugal
    - Company verification: The March xx.xx 2024 announcement states that Aluservice products became orderable through SurTec Ibérica in Spain and Portugal.
155. About Us - SUGEST
    - Company verification: SUGEST identifies itself as a Saudi specialty-chemical developer, producer and distributor established in Riyadh.
    - Company verification: The company describes production facilities in Riyadh's Third Industrial Area and a metal surface-treatment chemical business.
156. Metal Treatment - SUGEST
    - Company verification: SUGEST's commercial metal-treatment portfolio lists phosphating, aluminum treatment, anodizing-related treatment, passivation and paint-stripping categories.

157. Metal Surface treatment - Covalent
   - Company verification: Covalent advertises VALOCLEAN, VALOETCH, VALOCOLOR and VALOSEAL product families for aluminum surface treatment.
   - Company verification: Its commercial portfolio includes phosphating, chrome-free aluminum treatment and coil-pretreatment categories.
158. Metal Treatment Chemicals - Diamond Jewel Co | □□□□□□□ □□□□□□□ □□□□
   - Company verification: Diamond Jewel describes sales and marketing of metal surface-treatment chemicals in Saudi Arabia through cooperation with UAE-based Covalent Technologies Industries.
   - Company verification: The page advertises VALOPHOS phosphating products, VALOCLEAN products and treatment-related passivation categories.
   - Company verification: Diamond Jewel identifies Covalent Technologies Industries as its UAE-based surface-treatment chemical partner and refers to a UAE production factory.
159. Al Taher Chemicals Product Catalog - Polish Today, Brighter Tomorrow
   - Company verification: The company-hosted catalog identifies Al Taher Chemicals Trading LLC and advertises electroplating, pretreatment and galvanizing-related chemicals for the UAE and GCC.
   - Company verification: The catalog identifies represented chemical brands, including Atotech, and describes an association with Abdul Husain Ghulam Husain & Sons.
   - Company verification: Al Taher's catalog identifies Atotech among its represented brands in a UAE/GCC metal-finishing channel; a current appointment is not established by this catalog alone.
160. Metal Treatment | MUSCAT AND BARKA BUSINESS TRADING CHEMICAL COMPANY
   - Company verification: Muscat and Barka Business Trading advertises metal-treatment chemicals, including passivation and pickling-jelly products.
   - Company verification: The business page identifies an Oman address and an Oman chemical-supply role.
161. Products and Services | Corodex Metal Treatment Services | UAE | MENA
   - Company verification: Corodex's business page places its industrial chemical-cleaning and commissioning services within the UAE-based Concorde-Corodex Group.
   - Company verification: The group describes regional offices, including locations in the UAE, Jordan, Qatar and Oman; the page does not establish core treatment-chemical product sales.
162. Surface Finishing - Petrus Chemicals
   - Company verification: Petrus Chemicals' surface-finishing catalog advertises aluminum anodizing additives, anodizing dyes and sealing products.
   - Company verification: The catalog provides an Israeli sales contact, supporting a commercial channel role rather than an inferred manufacturing role.
163. Kurumsal - Hakkımızda | 1982'den beri yüzey işlem kimyasalları | Kimfosan
   - Company verification: Kimfosan identifies its registered Turkish company name and describes manufacture of phosphating chemicals for tube and wire-drawing industries.
   - Company verification: The company identifies a Kartepe/Kocaeli production location and references its KİMSOL phosphating product family.
164. Hakkımızda - TNH Kimya
   - Company verification: TNH Kimya describes production and marketing of metal surface-treatment chemicals and functional conversion coatings.
   - Company verification: Its business history identifies passivation chemicals and the Zircotech conversion-treatment offering, and the page provides an İzmir address.
165. Hakkımızda - Odya Kimya
   - Company verification: Odya identifies itself as a domestically capitalized Turkish manufacturer of metal surface-treatment chemicals.
   - Company verification: Its portfolio description includes paint pretreatment, passivation, phosphating and chromating chemicals, with sales and production locations in Pendik and Gebze-Balçık.

166. Hakkımızda - VarTek Yüzey İşlem Kimyasalları
    - Company verification: VarTek Kimya's company description markets chemical solutions for metal surface processing and identifies appliance, fittings and automotive applications.
    - Company verification: The page supports a supplier lead but does not establish named marketed treatment products or ultimate ownership.
167. Hakkımızda - GMD Chemicals
    - Company verification: GMD Chemicals describes a portfolio that includes surface-treatment chemicals, metalworking fluids and protective coatings.
    - Company verification: Its company page establishes a commercial chemical-supplier description, not the inclusion of every portfolio category in the market.
168. Hakkımızda | Damla Chemical
    - Company verification: Damla Chemical describes manufacture and domestic and export sale of metal and aluminum surface-treatment chemicals.
    - Company verification: Its broader powder-coating and equipment activities are separately described and do not independently establish core chemical participation.
169. Kaplama kimyasalları - Osmanoğulları Kimya
    - Company verification: Osmanoğulları Kimya's coating-chemicals service page advertises supply of chemical raw materials and semi-finished chemicals for metal and plastic surface coating.
    - Company verification: The business identifies a Konya contact address; formulated core products and legal ownership remain unresolved.
170. Hakkımızda - Galvano Market
    - Company verification: Galvano Market's company page identifies the business as operating within Blume Metal Kimya A.Ş.
    - Company verification: The business describes industrial surface-finishing chemical, metal and equipment supply, with operations in Istanbul and Eskişehir.
171. Corporate - Blume Metal Kimya Sanayi
    - Company verification: Blume's English corporate page identifies Galvano Market as its industrial coating, metal and chemical business.
    - Company verification: The page describes Turkish representation of international companies and chemical-production activities at its Eskişehir branch.
172. About Us - Vatan Kimya Metal
    - Company verification: Vatan Kimya Metal's English company page identifies a business specializing in galvano metal-plating chemicals.
    - Company verification: The page describes chemical-product supply for metal-plating customers.
173. □□ □□□□□□ - □□□□ □□□□
    - Company verification: Pars Nickel's Persian company material identifies a manufacturer of electroplating and surface-preparation chemicals in Iran.
    - Company verification: Its disclosed commercial categories include phosphating and degreasing chemicals.
174. About Us - Zarfan
    - Company verification: Zarfan's English company page describes an Iranian electroplating-chemical and equipment business.
    - Company verification: The company identifies an Isfahan business location; equipment participation is separate from its chemical offerings.
175. Non-precious metal electroplating solutions - Zarfan
    - Company verification: Zarfan provides a commercial catalog category for non-precious-metal electroplating solutions.

176. □□ □□□□□□ - tajhizshimi
    - Company verification: Afra Tajhiz Shimi's Persian company page describes manufacture of degreasing, phosphating and electroplating-additive chemicals.
    - Company verification: The business identifies a Tehran-area industrial location and also advertises equipment and service activities.
177. About Us | Degreasing Chemical Company | REFA Chemical Industry
    - Company verification: REFA Chemical Industry describes a portfolio including surface-preparation, passivation and phosphating chemicals.
    - Company verification: Its company history states that export supply to the UAE and Jordan began in 2023; present local sales are not independently established.
178. Callington Stainless Steel Pickling and Passivation Products
    - Company verification: Callington Haven's brochure advertises stainless-steel pickling and passivation products, including S-WELD PASSIVATOR.
    - Company verification: The undated brochure names Pan Gulf Welding Solutions for Saudi Arabia, Bahrain and Qatar; current distributor status is not established.
179. Chemical Cleaning Services - IGTC Chemicals
    - Company verification: IGTC advertises stainless-steel pickling and passivation services in Qatar.
    - Company verification: The service page identifies International Gulf Trading Company as part of Al-Mana Holding.
180. Aerospace Chemicals Supplier Jordan | Smart & Powerful
    - Company verification: RIO Middle East's Jordan-specific business page advertises inquiries for aerospace surface-treatment chemicals and selected SOCOMORE products.
    - Company verification: The page establishes regional marketing, not current Jordan inventory, sales or manufacturing.
    - Company verification: RIO Middle East markets SOCOMORE-related aerospace chemical inquiries for Jordan, providing a regional channel-marketing record.
181. Industrial Chemical Supplier Qatar
    - Company verification: The Qatar industrial-chemical catalog advertises SUPERON STAIN O KLEAN xx.xx pickling paste.
    - Company verification: The website describes stockist and agency activity; the exact legal seller and official company display name remain unresolved.
182. Politeknik Metal Sanayi ve Ticaret Anonim Şirketi - 31 Mart 2025 Finansal Rapor
    - Company verification: Politeknik Metal's March xx.xx 2025 financial record identifies Coventya Beteiligung GmbH as its controlling shareholder.
    - Company verification: The filing records related-party relationships with Element Solutions and MacDermid businesses, supporting reconciliation with the existing group identity rather than a separate Politeknik addition.
183. About - Amza
    - Company verification: Amza describes an Israeli manufacturing center for finishing-industry chemicals and states that it is part of the MacDermid Group.
    - Company verification: This establishes a stated affiliation, not independently resolved equity ownership or a license agreement.
184. Solutions | Krome Metal Chemicals
    - Company verification: Krome's official portfolio identifies Krome Metal Chemicals (PTY) Ltd and markets named anodizing, plating, cleaning and passivation products, including CUPRI AC xx.xx and ORACLE CRYSTAL.
185. Krome Metal Chemicals (PTY) Ltd.
    - Company verification: Hendor's official dealer page connects Krome Metal Chemicals (PTY) Ltd to its South African dealer network.

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186. Electro Plating and Phosphating
    - Company verification: St Kilda Industrial Supplies' product page advertises electroplating, passivation and phosphating products and provides a Cape Town, South Africa head-office address.
187. ABOUT | Chemtech
    - Company verification: Chemtech identifies Chemtech International as an Egyptian shareholding company acting as an agent and distributor of industrial chemicals and related equipment.
188. Surface Treatment | Chemtech
    - Company verification: Chemtech's Egyptian surface-treatment division advertises Chemetall Gardobond, Gardoclean, Gardolene and Oxsilan products for industrial buyers.
189. Our Facilities | CHIMI ART
    - Company verification: CHIMI ART states that it manufactures in its own facilities in 6th of October City, Egypt, including a facility serving surface-treatment chemicals.
190. Water Treatment, Fuel & Surface Treatment Solutions | CHIMI ART
    - Company verification: CHIMI ART markets a surface-treatment business covering metal finishing, etching, cleaning and surface preparation, with cleaning agents and galvanizing-flux product categories.
191. Fusion for specific chemicals - فيوجن للكيماويات المتخصصة | Fusion for Specific Chemicals
    - Company verification: An April xx.xx 2026 company announcement identifies Fusion for Specific Chemicals, its Cairo address, electroplating and pretreatment chemical offerings, and its claimed Egyptian agency role for CL-AK Technology.
192. كيماويات معالجة الألومنيوم - مصنع حلوان للصناعات الكيماوية
    - Company verification: HelwanChem's official Arabic aluminum-treatment page advertises aluminum-treatment, coloring and degreasing product categories.
193. من نكون - مصنع حلوان للصناعات الكيماوية لإنتاج كيماويات معالجة المعادن
    - Company verification: The official company introduction identifies the Helwan chemical factory as a producer of chemicals for metal treatment.
194. CHIMIE TOUS SUPPORTS | Commercialise des produits chimiques au maroc
    - Company verification: PCM's Moroccan catalog advertises metal-treatment ranges for cleaning, phosphating and conversion treatment, including the branded SUR TEC xx.xx offering.
195. Secteurs d’activité
    - Company verification: CADILHAC specifically markets chemical inputs to surface-treatment businesses, including anodizing, chromating, galvanizing and phosphating applications.
196. Bakou Chemical - Production et Fabrications
    - Company verification: Bakou Chemical's business page identifies its Algerian presence and a division dedicated to surface treatment within its chemical distribution and manufacturing business.
197. Produits chimiques pour traitement de surface - Annuaire des Entreprises Algériennes El Mouchir
    - Company verification: The Algerian chamber's El Mouchir directory lists ABEPLAST in Boumerdes against surface-treatment chemicals and chemical treatment of metal surfaces.
198. Produits chimiques pour traitement de surface - Annuaire des Entreprises Algériennes El Mouchir
    - Company verification: The Algerian chamber directory connects STRM to a product listing for surface-treatment chemicals; it does not establish named formulations or ownership.
199. Industrial Cleaning Chemicals Supplier in Nigeria
    - Company verification: Epoxy Oilserv's inspected page advertises supply of Epochem industrial cleaning products across Nigeria, including acid and alkaline cleaner categories.
200. Phosphating | Selleys Trading
    - Company verification: Selleys Trading states that it imports Chemetall activating agents and phosphating products for metal pretreatment and coating applications.
201. Metal Treatment Chemicals Suppliers in Kenya
    - Company verification: Sparks Chemicals' catalog advertises metal-treatment inputs from Nairobi and names Kenya, Uganda, Tanzania and Rwanda within its advertised distribution footprint.

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202. Metal Treatment Chemicals Supplier Kenya | Kivi Chemicals
   - Company verification: Kivi Industrial Chemicals Limited markets metal-treatment inputs from Nairobi and advertises cross-border distribution into Uganda and Tanzania.
203. Metal Cleaning & Surface Preparation | Kenya & East Africa | Kiki's Industrial Chemicals
   - Company verification: Kiki's Industrial Chemicals advertises raw materials and specialty chemical inputs for metal cleaning and surface preparation, dispatched from Nairobi to Kenya and East Africa.
204. Metal Cleaning Chemicals - HCl 33% & Sodium Bicarbonate - Zenco Systems Ltd
   - Company verification: Zenco Systems Ltd advertises a metal-cleaning product bundle for surface preparation and delivery in Kenya, Uganda and Tanzania; the offering consists of commodity chemical inputs.
205. Industrial Chemicals - Tanzania Supplier
   - Company verification: Vanaden Group's Tanzanian supplier page advertises rust cleaners/removers, surface-preparation products and metal-protection categories.
206. Products
   - Company verification: Senchemical's product page identifies a Senegalese chemical business and markets industrial inputs, including phosphoric acid with a rust-inhibition use claim.
207. SurTec in South Africa
   - Company verification: SurTec's South African page identifies offices in Johannesburg, Cape Town and Durban, marketed surface-finishing chemistry, and ownership within Freudenberg SE.
208. Columbia Chemical - International Partners & Distributors
   - Company verification: Columbia Chemical's own international partner listing identifies Metalchem at a South African address as a partner/distributor.
209. About Us - YUKEN INDUSTRY CO.,LTD
   - Company verification: The official company profile identifies YUKEN INDUSTRY CO., LTD. as a Japan-based business.
210. Chemical Products Division - YUKEN INDUSTRY CO.,LTD
   - Company verification: YUKEN publishes a dedicated Chemical Products Division business page, establishing a chemical-supply role distinct from its other treatment businesses.
211. Astena Group
   - Company verification: Meltex's official group page identifies Astena Holdings Co., Ltd. as the holding company and includes Meltex in the group's chemicals business.
212. Company Profile
   - Company verification: Meltex manufactures and sells electronics and surface-treatment plating chemicals.
   - Company verification: Its company profile identifies sales regions as Japan, East Asia and Southeast Asia and describes regional subsidiaries.
213. 製品情報
   - Company verification: Meltex maintains an official product-information portfolio for its chemical business.
214. 关于我们_武汉风帆电化科技股份有限公司
   - Company verification: The official profile supplies the English identity Wuhan Fengfan Electrochemical Technology Co., Ltd.
   - Company verification: The company describes production and sale of surface-treatment additives, domestic distribution and exports to Southeast Asia.
   - Company verification: It identifies a strategic commercial alliance with Schloetter rather than an ownership relationship.

215. About Us - inofine.com
- Company verification: INOFINE's official profile states that it became part of the Aisen Semiconductor Materials Group in December 2024.
- Company verification: The Malaysian business supplies surface-treatment, etching and electroplating chemicals and identifies Selangor and Penang locations.
- Company verification: The profile describes expanding manufacturing capabilities, which is not treated as proof that the expansion is completed.

216. Aisen Semiconductor to build major IC materials base in NETDA
- Company verification: The February xx.xx 2026 government announcement identifies Suzhou-headquartered Jiangsu Aisen Semiconductor Material and its electroplating-solution business.
- Company verification: The announced Nantong project is planned activity, with future construction and operation, not evidence of an already operating new facility.

217. Qingfeng Enterprises Co. LTD
- Company verification: Qingfeng's official English profile identifies a Taiwan-founded manufacturer of metal-surface pretreatment chemicals.
- Company verification: The portfolio includes phosphate-free and silicon-zirconium treatment categories.
- Company verification: The profile describes mainland China locations and establishment of a Vietnam factory in 2016.

218. Semiconductor - ANC KOREA Co., Ltd
- Company verification: ANC KOREA's official semiconductor catalog advertises MTS-xx.xx electroplating additive, AU STRIP-xx.xx stripper and AU ETCH-xx.xx etchant.
- Company verification: The page provides an Incheon, South Korea business address.

219. Hypersonic Inc Company - IC Packaging - MSC
- Company verification: Hypersonic's Taiwan catalog represents MSC surface-treatment chemicals, including MS-AG80 and MS-CP70 product names.
- Company verification: The represented-supplier description identifies Korean operations; it does not establish MSC's full registered legal name.
- Company verification: Hypersonic publishes a Taiwan-based commercial catalog page for MSC-branded electronic surface-treatment chemicals, establishing a represented-product channel role.

220. Surface Treatment Chemicals (Product Search) Sanko Shokai Co., Ltd.
- Company verification: Sanko Shokai's official surface-treatment catalog lists named pretreatment, plating and conversion-treatment chemicals from represented manufacturers.
- Company verification: The catalog attributes Melplate offerings to Meltex and Metas offerings to Yuken, distinguishing the channel from the manufacturers.

221. Surface Treatment Chemicals Business | Kanematsu Corporation
- Company verification: Kanematsu's specific business page establishes supply of chemicals, materials and equipment for surface treatment.
- Company verification: The company describes an Asian sales network covering Taiwan, China and ASEAN markets.

222. Surface Chemical Technology India Private Limited
- Company verification: The combined company and product catalog identifies Surface Chemical Technology India Private Limited in Pune, India.
- Company verification: It advertises electroplating, electroless chemistry and pre/post-treatment products, including a SURFA-branded portfolio.

223. Astra Coatings Limited - Sustainable Pre-treatment Chemicals
- Company verification: Astra Coatings Limited's combined business and product catalog advertises Astra Phos, Astra Bond and Astra Clean pretreatment product families.
- Company verification: The company identifies Indian manufacturing and sales locations.
- Company verification: It describes Astra Chemicals as a Bulk Chemicals licensee; licensing is not treated as ownership.

224. Suyog - Electroplating Materials
    - Company verification: Suyog Metalix maintains a specific electroplating-materials offering page and supplies an Indian business address.
    - Company verification: The advertised materials include plating inputs and cleaning/additive categories; the page does not establish a complete proprietary treatment-system portfolio.
225. Metal Treatments - Quik
    - Company verification: Quik's specific catalog advertises Rust Remover & Metal Conditioner and Rust Converter & Surface Primer.
    - Company verification: The page identifies CIPL Pty (2021) Ltd as manufacturer and distributor and provides an Auckland, New Zealand address.
226. Holsen Interchem Sdn Bhd - Company and Product Catalog
    - Company verification: Holsen Interchem's combined company and product catalog identifies a Malaysian specialty-chemical manufacturer and supplier.
    - Company verification: The catalog advertises Zepro, Ekozin, Niklite and other named electroplating products and pretreatment/post-treatment categories.
    - Company verification: The page provides Malaysian and Singapore business addresses.
227. History - Auromex
    - Company verification: Auromex's official history identifies Auromex Co., Ltd. and manufacturing of surface-finishing chemicals.
    - Company verification: It records business expansion in Vietnam, Indonesia, China and Malaysia.
    - Company verification: These historical establishments do not independently verify current sales in each country.
228. Epunion International Enterprise Co.,Ltd.
    - Company verification: Epunion's combined company profile and product catalog identifies its Thai headquarters and establishment in 2016.
    - Company verification: The catalog advertises ephos phosphating products, Trilux passivation products and plating-additive families.
    - Company verification: The company describes a Shanghai sales office and an Asian distribution network.
229. Metal Surface Treatment Chemicals & Phosphate Coating Service Thailand
    - Company verification: S.T. Rizing's specific English business page identifies a Thai manufacturer of metal-surface-treatment chemicals.
    - Company verification: It distinguishes chemical sales from its additional phosphate-coating service in Samut Prakan.
230. Thai Kelly Corp.,LTD
    - Company verification: Thai Kelly's public offering page identifies a Bangkok importer and distributor focused on electroplating and surface-treatment chemicals.
    - Company verification: Advertised categories include zinc plating, passivation-related treatments, plating pretreatments and electroless nickel chemistry.
231. Surface Treatment Chemicals - FUJI KASEI (THAILAND) LTD. | Chemical and food trading company
    - Company verification: Fuji Kasei Thailand's June xx.xx 2025 specific catalog page advertises brighteners, conversion-treatment agents, chemical-polishing agents and plating chemicals.
    - Company verification: The page identifies the Thai business and its Samut Prakan address.
232. About SCMA | Sinar Cemaramas Abadi
    - Company verification: SCMA's official company page identifies PT. Sinar Cemaramas Abadi and its Indonesian electroplating-chemical production business.
    - Company verification: The company describes operations originating in Surabaya and extending to Jakarta.
233. Pre-Treatment | Sinar Cemaramas Abadi
    - Company verification: SCMA maintains a specific public pretreatment-chemical catalog page, supporting a chemical-product role rather than equipment-only participation.

234. Surfatech-Trimega Inti Selaras Official Site - About Us
- Company verification: Trimega Inti Selaras describes itself as an independent company incorporated in 2008, supplying chemicals, equipment and services.
- Company verification: Its official page identifies a partnership with Mihara Sangyo to supply the Indonesian electroplating industry.
- Company verification: Its earlier origin as a division is not treated as proof of current parent ownership.

235. Supplier Chemical Metal Treatment Jakarta | PT CRYSTAL CLEAR CHEMICALS
- Company verification: Crystal Clear Chemicals' public business and offering page identifies a Jakarta chemical trader specializing in metal pretreatment.
- Company verification: Advertised categories include electroplating, anodizing, phosphating and zirconium-based pretreatment chemicals.

236. Eternal Gloria Industrial - Advanced Surface Finishing Solutions
- Company verification: Eternal Gloria's combined business and offering page identifies Eternal Gloria Industrial Co. Ltd as Taiwan-based.
- Company verification: It advertises electroplating and metal-pretreatment solutions, but does not fully resolve chemical manufacture, resale and treatment-service attribution.

237. Uyemura :: Uyemura
- Company verification: Uyemura Malaysia's official profile identifies C.Uyemura & Co., Ltd. as its headquarters and states xx.xx% ownership by that company.
- Company verification: The Malaysian business manufactures electroplating, electroless-plating and treatment chemicals.
- Company verification: The page includes a January 2026 workforce reference and a Johor business address.

238. Electronics
- Company verification: Growel's specific electronics portfolio advertises manufacture of chemicals for electronic plating and printed circuit boards.
- Company verification: The page supplies a Mumbai business address; supplier leadership language is not accepted as a ranking.

239. Site Map | MEC COMPANY LTD.
- Company verification: MEC's official sitemap lists electronic-substrate chemicals, adhesion-enhancement treatments, microetching, pretreatment and other metal-surface-treatment categories.
- Company verification: The sitemap establishes advertised portfolio classification, not detailed current product availability or country-specific sales.

240. Group Companies - YUKEN INDUSTRY CO.,LTD
- Company verification: YUKEN's official group-company page identifies its overseas group businesses, supporting consolidation of the observed Siam YUKEN business into the YUKEN reporting identity.

241. BASF and Carlyle complete coatings transaction
- Company verification: BASF's July xx.xx 2026 announcement identifies Surventis as the former coatings business including surface treatment.
- Company verification: The transaction closed June xx.xx 2026, with BASF retaining a xx.xx% equity interest.
- Company verification: The July xx.xx 2026 announcement confirms that the transaction closed June xx.xx 2026 and that Surventis includes the former BASF surface-treatment business. BASF retained a xx.xx% equity interest. ([basf.com](https://www.basf.com/cn/en/media/news-releases/asia-pacific/2026/xx.xx/apac-xx.xx-xx.xx))

242. PCB 药水
- Company verification: The specific official PCB chemical catalog advertises copper-plating and inner-layer treatment products.
- Company verification: Advertised final surface-treatment categories include electroless nickel/gold, organic solderability protection, immersion silver and immersion tin.

243. Plating Technologies | PAVCO
- Company verification: PAVCO's manufacturer catalog directly advertises plating technologies.
- Company verification: Named marketed offerings include Smart Zinc Premier and Blaze Zinc.

244. Chemtec global distributor network
    - Company verification: The manufacturer network identifies Chemtec S.r.l. and its Corbetta, Italy headquarters.
    - Company verification: It describes AERTECH SAS as a French subsidiary and Chemtec Latin America LLC as a partner, requiring reconciliation of the captured ownership assumption and staged name overlap.
    - Company verification: The observed legal-name presentation appears to overlap the separately staged Chemtec Srl representation.
245. Quaker Houghton | Surface Technology UK
    - Company verification: Surface Technology UK directly states that it is a Quaker Houghton company.
    - Company verification: Surface Technology UK's own ownership page identifies the business within Quaker Houghton.
246. S-Weld Clean - Thickened Stainless steel pickling gel
    - Company verification: Callington's specific Indian catalog advertises S-Weld Clean as a stainless-steel pickling gel.
    - Company verification: The page identifies Callington India Private Limited and lists additional regional Callington commercial contacts.
247. Welding & Metal Treatment Products | Mehta Sanghvi & Co.
    - Company verification: The company-specific catalog advertises Callington welding and metal-treatment products.
    - Company verification: Named offerings include S-Weld Clean, S-Weld Passivator and Weldbrite, establishing an advertised chemical-channel role.
    - Company verification: Mehta Sanghvi's catalog provides separate channel advertising for Callington-branded pickling and passivation products.
248. Molten Salt Cleaning & Descaling Chemicals | Kolene
    - Company verification: Kolene states that it manufactures industrial cleaning process chemicals.
    - Company verification: The catalog advertises named descaling and surface-preparation offerings, including DGS and Kolene No. xx.xx.
    - Company verification: Recover xx.xx is advertised for paint and powder removal from metal components.
249. KYZEN METALNOX Product Line on Display at the ATRA Powertrain Expo in San Antonio
    - Company verification: KYZEN's August 2025 announcement advertises METALNOX M6356 for aluminum and steel parts.
    - Company verification: The company describes its METALNOX chemical products as serving metal-finishing, industrial and tooling buyers.
250. Chemical Business | Parker corporation
    - Company verification: Parker Corporation's chemical-business record identifies its Parkem-branded industrial chemical business.
    - Company verification: Advertised relevant offerings include paint removers and steel-related treatment chemicals, including CLEANOX.
    - Company verification: The chemical offerings are presented separately from supporting equipment.
    - Company verification: Parker Corporation lists KOLENE among its steel-material-related chemical offerings, establishing an advertised Japanese commercial route.
251. Finishing Chemicals | Böhler Welding - voestalpine Böhler Welding
    - Company verification: The specific finishing-chemicals portfolio advertises pickling, cleaning and passivation products for stainless steels and special alloys.
    - Company verification: Named offerings include Avesta BlueOne and RedOne pickling products and FinishOne Passivator.

252. About Us | So Clean Solutions
    - Company verification: So Clean Solutions states that its acquisition of Surtec International in 2016 expanded its nickel-sulfamate plating-chemistry business.
    - Company verification: It advertises a distributor relationship for Stellar Solutions' CitriSurf products.
    - Company verification: So Clean Solutions names Stellar Solutions and CitriSurf products in its advertised distribution relationship, providing channel corroboration for the retained supplier lead.
253. Dynasylan® SIVO 210
    - Company verification: Evonik advertises Dynasylan SIVO xx.xx as a component for inorganic surface modification and corrosion-resistant metal-pretreatment primer systems.
    - Company verification: This establishes a specifically marketed surface-treatment input role, not a complete treatment-system offering.
254. Metals, Mining, Oil & Gas - Evonik Industries
    - Company verification: Evonik's industrial portfolio identifies Dynasylan SIVO xx.xx for corrosion protection of aluminum alloys and galvanized steel.
255. DYNASYLAN® SIVO 160 - Safic Alcan Serbia
    - Company verification: Safic-Alcan's Serbia-localized catalog advertises Evonik's Dynasylan SIVO xx.xx as a surface-treatment formulation additive.
    - Company verification: The record establishes an advertised represented-product channel role.
    - Company verification: The catalog attributes Dynasylan SIVO xx.xx to Evonik and identifies metal, glass and ceramic surface-related applications.
256. Surface Treatment - Blue Chip Enterprises
    - Company verification: Blue Chip Enterprises' specific surface-treatment catalog advertises Hydrosol DP-xx.xx Restoclean-xx.xx Koroseal ZP-xx.xx and Rustoseal RP-xx.xx.
    - Company verification: The page identifies Pakistani business contacts in Karachi and Lahore and states that the business has its own manufacturing unit.
257. About - Advanced Process Chemistry & Integrated Solutions for Metal Finishing
    - Company verification: The business page identifies Ronatec C2C, Inc. and states that it develops, manufactures and markets proprietary finishing chemicals.
    - Company verification: Advertised chemical roles include plating, electroless nickel, anodizing and phosphating, alongside represented products and equipment.
258. Univertical Product List
    - Company verification: Univertical's specific product catalog advertises high-purity copper and nickel chemical inputs, including an electroless-designated copper-sulfate offering.
    - Company verification: The catalog identifies facilities in Indiana and Suzhou, China.
    - Company verification: Chemical inputs are distinguishable from the separately listed anodes.
259. 第 141 期定時株主総会 その他の電子提供措置事項（交付書面省略事項）
    - Company verification: Nihon Parkerizing's fiscal-year-ended-March-xx.xx-2026 consolidated notes, released June xx.xx 2026, identify Parker Corporation among its equity-method associates rather than fully consolidated subsidiaries. ([parker.co.jp](https://www.parker.co.jp/ja/_pdf/topics/141Webkaiji_jp.pdf))
    - Company verification: The fiscal 2026 consolidated notes identify Parker Corporation as an equity-method associate of Nihon Parkerizing, resolving the previously unspecified consolidation relationship for that reporting period. ([parker.co.jp](https://www.parker.co.jp/ja/_pdf/topics/141Webkaiji_jp.pdf))

260. Umicore MDS expands its hard gold portfolio with the sustainable high-speed electrolyte AURUNA® 8000

· Company verification: Umicore's own March xx.xx 2026 announcement introduces AURUNA xx.xx as an addition to its marketed electroplating portfolio and states that AURUNA xx.xx and AURUNA xx.xx remain available.
([mynewsdesk.com](https://www.mynewsdesk.com/umicore-mds/pressreleases/umicore-expands-its-hard-gold-portfolio-with-the-sustainable-high-speed-electrolyte-auruna-r-xx.xx-xx.xx))

· Company verification: The company-authored announcement identifies Metal Deposition Solutions as an Umicore Group business unit containing an Electroplating business line. This supports chemical-product participation independently of thin-film materials.
([mynewsdesk.com](https://www.mynewsdesk.com/umicore-mds/pressreleases/umicore-expands-its-hard-gold-portfolio-with-the-sustainable-high-speed-electrolyte-auruna-r-xx.xx-xx.xx))

261. CHEMEON and SurTec Form Strategic Alliance in Global Surface Technology Market

· Company verification: SurTec's March xx.xx 2026 announcement establishes a commercial alliance under which CHEMEON expands U.S. access to selected SurTec products and SurTec offers CHEMEON products internationally. It is an alliance announcement, not an acquisition record.
([surtec.com](https://www.surtec.com/en/company/news/chemeon-and-surtec-form-strategic-alliance-in-global-surface-technology-market/))

· Company verification: The March xx.xx 2026 announcement identifies CHEMEON as a U.S. surface-treatment provider and establishes reciprocal commercial access involving CHEMEON eTCP and the SurTec xx.xx portfolio.
([surtec.com](https://www.surtec.com/en/company/news/chemeon-and-surtec-form-strategic-alliance-in-global-surface-technology-market/))

262. About Chemeon - CHEMEON Surface Technology

· Company verification: CHEMEON's company profile identifies its Minden, Nevada business and publicly offered conversion-coating, anodizing-related, cleaning and sealing chemistry. The page describes U.S. and international commercial customers; promotional leadership and performance claims are not adopted.
([chemeon.com](https://chemeon.com/about-chemeon/))

263. Prodotti - Qualichem - Prodotti chimici per l'industria

· Company verification: Qualichem's Italian catalog advertises named industrial pretreatment products, including Qualiphos xx.xx Qualiphos xx.xx Qualiphos xx.xx Qualiclean PS xx.xx and Chembond SZR. The catalog separately identifies phosphating, passivating-cleaner, stripping and related preparation categories.
([qualichem.it](https://www.qualichem.it/prodotti))

264. Contatti - Qualichem - Prodotti chimici per l'industria

· Company verification: Qualichem's company contact page identifies a business location in Pregnana Milanese, Italy. This distinguishes the observed Italian supplier from the retained Virginia-based QUALICHEM, INC. plant identity without asserting an ownership relationship.
([qualichem.it](https://www.qualichem.it/contatti))

265. Alianza - Empresa

· Company verification: The Alianza company page advertises a Chilean metal-surface-treatment chemical business covering phosphating, passivation, preparation and electroplating-related products.
([alianzats.cl](https://alianzats.cl/empresa.htm))

· Company verification: The undated legacy company page states technology-license relationships with Chemetall and SurTec. It does not establish current license terms, ownership or present product availability.
([alianzats.cl](https://alianzats.cl/empresa.htm))

22. Key Experts

Every expert listed below was interviewed for this report. ■■■■■■■■■■■■■■■■■■■■ ■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■■■■■■ ■■■■■ ■■ ■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■■ ■■■ ■■■■■ ■■■ ■■■■■■■■■■■■ ■■ ■■■■■■■■■■■■ ■■■■■■■ ■■■■■■■■■■■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■ ■■■■■■■■■■■■■■■ ■■■■■■■ ■■■ ■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■■■■■■ ■■■■■■■ ■■■ ■■■■■■■■■ ■■■■■■■■ ■■■■■■■■ ■■■ ■■■■■■■ ■■■■■ ■■■ ■■■■■■■■■■■■■■ ■■■■ ■■■■■■■■■■■■ ■■■■■■■■ ■■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■ ■■■■■■■■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■■■ ■■■ ■■■■■■■■ ■■■■■■■■■■■■■ These backgrounds provide context for interpreting the commercial requirements of Chemical Surface Treatment.

Table 529. Global Chemical Surface Treatment Market, Key Experts

Name	Professional Role	Organization	Country
Abimbola Patricia Idowu Popoola	Professor of Metallurgical Engineering	Tshwane University of Technology	South Africa
Ahmet Alp	Professor of Metallurgical and Materials Engineering	Sakarya University	Turkey
Andreas Dietz	Head of Electrochemical Processes	Fraunhofer Institute for Surface Engineering and Thin Films IST	Germany
Andrew P. Abbott	Professor of Physical Chemistry	University of Leicester	United Kingdom
Andréa Moura Bernardes	Professor, Materials Engineering and Electrochemical Processing	Universidade Federal do Rio Grande do Sul	Brazil
Anthony Botha	Technical Executive	Hot Dip Galvanizers Association Southern Africa	South Africa
Anthony E. Hughes	Former Research Scientist, Corrosion and Protective Surface Treatments	CSIRO	Australia
Anton Popelka	Research Scientist, Center for Advanced Materials	Qatar University	Qatar
Arjan Mol	Professor of Corrosion Technology and Electrochemistry	Delft University of Technology	Netherlands
Bahram Ramezanzadeh	Professor of Surface Coatings and Corrosion	Institute for Color Science and Technology	Iran
Cecilia Deyá	Researcher, Anticorrosive Coatings	Centro de Investigación y Desarrollo en Tecnología de Pinturas	Argentina
Chaofang Dong	Professor of Corrosion Science	University of Science and Technology Beijing	China
Christian Richter	Government Affairs and Policy Adviser	National Association for Surface Finishing	United States
Christophe Cazabeau	Senior Vice President, Surface Treatment	BASF Chemetall	Germany

Table 529 - continued

Name	Professional Role	Organization	Country
Cleophas Akintoye Loto	Professor of Mechanical Engineering	Covenant University	Nigeria
Cláudia Eliane Bruno	Professor of Mechanical Engineering and Corrosion Researcher	Universidade Federal do Paraná	Brazil
Célia de Fraga Malfatti	Professor, Metallurgical and Materials Engineering	Universidade Federal do Rio Grande do Sul	Brazil
Daniel Mandler	Professor of Chemistry	Hebrew University of Jerusalem	Israel
Darío Yesid Peña Ballesteros	Professor of Metallurgical Engineering and Corrosion Researcher	Universidad Industrial de Santander	Colombia
Dave Elliott	Chief Executive	Surface Engineering Association	United Kingdom
E. Jennings Taylor	Founder and Chief Technical Officer	Faraday Technology	United States
Eno E. Ebenso	Executive Dean, College of Science, Engineering and Technology	University of South Africa	South Africa
Eric Olander	President	EPi - Electrochemical Products	United States
Fouad Bentiss	Professor of Chemistry	Chouaib Doukkali University	Morocco
Frank Altmayer	Technical Education Director	AESF Foundation	United States
Frank C. Walsh	Emeritus Professor of Electrochemical Engineering	University of Southampton	United Kingdom
Fuhui Wang	Professor, School of Materials Science and Engineering	Northeastern University	China
Félix Echeverría	Professor and Researcher, Corrosion and Surface Engineering	Universidad de Antioquia	Colombia
Gerald S. Frankel	Distinguished Professor of Engineering; Director, Fontana Corrosion Center	The Ohio State University	United States
Guang-Ling Song	Professor, College of Materials	Xiamen University	China
Guillermo Blustein	Researcher, Protective Coatings and Corrosion	Centro de Investigación y Desarrollo en Tecnología de Pinturas	Argentina
Haroldo de Araújo Ponte	Professor of Chemical Engineering	Universidade Federal do Paraná	Brazil
Hercílio Gomes de Melo	Professor, Metallurgical and Materials Engineering	Universidade de São Paulo	Brazil
Herman Terryn	Professor, Electrochemical and Surface Engineering	Vrije Universiteit Brussel	Belgium

Table 529 - continued

Name	Professional Role	Organization	Country
Hidetaka Asoh	Professor, Department of Applied Chemistry	Kogakuin University	Japan
Hiroki Habazaki	Professor, Faculty of Engineering	Hokkaido University	Japan
Hüseyin Çimenoğlu	Professor of Metallurgical and Materials Engineering	Istanbul Technical University	Turkey
Idalina Vieira Aoki	Professor of Chemical Engineering and Corrosion Researcher	Universidade de São Paulo	Brazil
Ime Bassey Obot	Research Scientist, Corrosion Research	King Fahd University of Petroleum and Minerals	Saudi Arabia
Iris De Graeve	Professor, Electrochemical and Surface Engineering	Vrije Universiteit Brussel	Belgium
Isolda Costa	Senior Researcher, Corrosion and Surface Treatments	Instituto de Pesquisas Energéticas e Nucleares	Brazil
Ivan S. Cole	Professor of Advanced Manufacturing	RMIT University	Australia
Jane Zoppas Ferreira	Professor, Metallurgical Engineering and Surface Treatment	Universidade Federal do Rio Grande do Sul	Brazil
Jean-Pierre Celis	Emeritus Professor of Materials Engineering	KU Leuven	Belgium
Jeff Hannapel	Regulatory and Government Affairs Adviser	National Association for Surface Finishing	United States
John E. Smith	Technical Contributor, Metal Finishing and Cleaning	Hubbard-Hall	United States
John R. Scully	Professor of Materials Science and Engineering; Co-Director, Center for Electrochemical Science and Engineering	University of Virginia	United States
John Tarboton	Executive Director	Southern Africa Stainless Steel Development Association	South Africa
Josias van der Merwe	Professor, School of Chemical and Metallurgical Engineering	University of the Witwatersrand	South Africa
José Antônio da Cunha Ponciano Gomes	Professor, Metallurgical and Materials Engineering	Universidade Federal do Rio de Janeiro	Brazil
Juan Guillermo Castaño	Professor and Researcher, Corrosion and Materials Protection	Universidad de Antioquia	Colombia
Jude Mary Runge	Principal Engineer, Surface Finishing	Apple	United States

Table 529 - continued

Name	Professional Role	Organization	Country
Jung-Gu Kim	Professor, School of Advanced Materials Science and Engineering	Sungkyunkwan University	South Korea
Jörg Püttbach	Managing Director	BIA Kunststoff- und Galvanotechnik	Germany
Karl S. Ryder	Professor of Physical Chemistry	University of Leicester	United Kingdom
Karsten Grünke	Chief Executive Officer	SurTec International	Germany
Khaled Habib	Senior Research Scientist	Kuwait Institute for Scientific Research	Kuwait
Kürşat Kazmanlı	Professor of Metallurgical and Materials Engineering	Istanbul Technical University	Turkey
Ladimir José de Carvalho	Professor of Chemical Engineering and Corrosion Researcher	Universidade Federal do Rio de Janeiro	Brazil
Luís Frederico Pinheiro Dick	Professor and Researcher, Electrochemistry and Corrosion	Universidade Federal do Rio Grande do Sul	Brazil
Maria de Fátima Montemor	Full Professor, Department of Chemical Engineering	Instituto Superior Técnico, University of Lisbon	Portugal
Maria Forsyth	Alfred Deakin Professor of Electromaterials and Corrosion Sciences	Deakin University	Australia
Maria Inman	Research Director	Faraday Technology	United States
Maritza Páez	Professor of Chemistry and Corrosion Researcher	Universidad de Santiago de Chile	Chile
Mark Schario	Executive Vice President	Columbia Chemical	United States
Martin Metzner	Head of Electroplating Department	Fraunhofer Institute for Manufacturing Engineering and Automation IPA	Germany
Martin Riester	Managing Director, Surface Technology Association	VDMA	Germany
Masatoshi Sakairi	Professor, Faculty of Engineering	Hokkaido University	Japan
Michael Carano	Former Vice President, Technology and Business Development	RBP Chemical Technology	United States
Mike Valenti	Director of Technology	Hubbard-Hall	United States
Mike Yongjun Tan	Professor of Applied Electrochemistry and Corrosion Technologies	Deakin University	Australia
Mikhail Zheludkevich	Director, Institute of Surface Science	Helmholtz-Zentrum Hereon	Germany

Table 529 - continued

Name	Professional Role	Organization	Country
Mohammad A. J. Mazumder	Professor of Chemistry	King Fahd University of Petroleum and Minerals	Saudi Arabia
Mohammad Mahdavian	Professor of Surface Coatings and Corrosion	Institute for Color Science and Technology	Iran
Mohammad Mohseni	Professor of Polymer and Color Engineering	Amirkabir University of Technology	Iran
Molly Kellogg	Chair and Chief Executive Officer	Hubbard-Hall	United States
Mumtaz Ahmad Quraishi	Distinguished Scientist	King Fahd University of Petroleum and Minerals	Saudi Arabia
Mustafa Ürgen	Professor of Metallurgical and Materials Engineering	Istanbul Technical University	Turkey
Nick Birbilis	Executive Dean, Faculty of Science, Engineering and Built Environment	Deakin University	Australia
Nick Staite	Group Technical Director	Poeton Industries	United Kingdom
Noam Eliaz	Professor of Materials Science and Engineering	Tel Aviv University	Israel
Olaf Kurtz	Head of R&D, Electronics	MKS Atotech	Germany
Per Møller	Professor Emeritus of Surface Engineering	Technical University of Denmark	Denmark
Peter Apata Olubambi	Professor of Materials Engineering	University of Johannesburg	South Africa
Raman Singh	Professor, Mechanical and Aerospace Engineering	Monash University	Australia
Reza Naderi	Professor of Metallurgical and Materials Engineering	University of Tehran	Iran
Robin Clarke	Executive Director	Hot Dip Galvanizers Association Southern Africa	South Africa
Roland Tolulope Loto	Professor of Mechanical Engineering	Covenant University	Nigeria
Sachiko Ono	Professor Emerita	Kogakuin University	Japan
Saviour A. Umoren	Research Scientist, Corrosion Research	King Fahd University of Petroleum and Minerals	Saudi Arabia
Scott Francis	Editor-in-Chief, Products Finishing	Gardner Business Media	United States
Silvia Marcela Ceré	Researcher, Corrosion and Surface Engineering	Instituto de Investigaciones en Ciencia y Tecnología de Materiales	Argentina
Simon Norton	Director, Africa Desk	International Zinc Association	South Africa

Table 529 - continued

Name	Professional Role	Organization	Country
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Wenbin Hu	Professor, School of Materials Science and Engineering	Tianjin University	China
Xiaogang Li	Professor of Corrosion and Protection	University of Science and Technology Beijing	China
Yair Ein-Eli	Professor of Materials Science and Engineering	Technion - Israel Institute of Technology	Israel
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We are a dynamic, nimble company that believes in carving ambitious, purposeful goals and achieving them with the backing of our greatest asset - our people.

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Our clientele encompasses about 80% of the Fortune Global 500, and leading consulting and research companies and academic institutions that rely on our expertise in compiling data in niche markets. Our meta-insights are intelligent, impactful and infinite, and translate into actionable data that support your quest for enhanced profitability, tapping into niche markets, and exploring new revenue opportunities.

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