

## **Surface Treatment Chemicals - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2026 - 2031)**

Market Report | 2026-02-09 | 120 pages | Mordor Intelligence

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### **Report description:**

Surface Treatment Chemicals Market Analysis

Surface Treatment Chemicals Market size in 2026 is estimated at USD 4.76 billion, growing from 2025 value of USD 4.46 billion with 2031 projections showing USD 6.57 billion, growing at 6.68% CAGR over 2026-2031. Strong momentum flows from automotive electrification, semiconductor packaging recovery, and offshore wind installations that demand corrosion-resistant systems. Asian manufacturing hubs account for most new capacity, while North American reshoring programs and European sustainability mandates redirect premium demand toward high-performance, chromium-free formulations. Suppliers that combine semiconductor-grade purity, multi-metal compatibility, and bio-based innovation capture rising value pools as legacy metal-finishing chemistries lose relevance. The surface treatment chemicals market benefits from regulatory convergence that penalizes hexavalent chromium, forcing end-users to adopt alternative coatings and cleaners that comply with strict occupational health and environmental limits.

Global Surface Treatment Chemicals Market Trends and Insights

Rapid Expansion of Automotive Production in Asia

Asia's automakers are scaling multi-material vehicle architectures that depend on cleaners able to prevent cross-contamination between aluminum and steel. Electric-vehicle battery housings, structural castings, and heat-management plates require precision etching and conversion coatings that tolerate mixed alloys without galvanic corrosion. Element Solutions recorded 10%

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electronics-segment sales growth to USD 394 million in Q1 2024, illustrating how automotive electrification lifts semiconductor-grade chemical volumes. Regional consolidation nonetheless concentrates risk: Chinese export controls on gallium and germanium disrupt plating supply for power-devices embedded in traction inverters. Suppliers with diversified Asian footprints and redundant raw-material sources mitigate these vulnerabilities while capitalizing on sustained output gains.

#### Electronics Miniaturisation Demanding High-Precision Plating

Semiconductor packaging materials revenues are forecast to climb to USD 26 billion in 2025 after a 2023 downturn, restoring capacity utilization across advanced substrate lines. Flip-chip and wafer-level packages impose  $\pm 1 \mu\text{m}$  thickness tolerances on electroless nickel, immersion gold, and oxide-free cleaners. DuPont's photoresist expansion in Japan and Sumitomo Chemical's JPY 300 billion chip-materials sales goal by 2030 underscore the pull for ultra-pure treatment chemicals. Suppliers that deliver low-defect, high-selectivity formulations displace traditional metal finishers whose processes cannot control trace contaminants below parts-per-trillion thresholds. Outsized capital intensity and strict cleanroom protocols raise barriers, enabling premium pricing that supports double-digit contribution margins for qualified vendors.

#### Regulatory Clamp-Down on Hexavalent Chromium

The European Union, California, and the United Kingdom enacted parallel bans on hexavalent chromium during 2024, triggering cumulative compliance outlays estimated between USD 331 million and USD 1.07 billion across the supply chain. Transition pathways include trivalent chromium, PVD sputtering, and ceramic titanium-nitride sealers. Aerospace primes impose multiyear qualification cycles for alternatives, tightening near-term capacity as plating shops retrofit lines. Early adopters of fluorozirconate or molybdate sealing chemistries secure sole-source positions because flight-safety regulations discourage supplier substitutions once parts pass airworthiness validation. Smaller job shops face capital barriers that may accelerate market consolidation.

Other drivers and restraints analyzed in the detailed report include:

Stringent Anti-Corrosion Standards in Wind-Turbine Towers  
On-Site 3D-Printed Metal Parts Requiring Post-Print Surface Prep  
Shift Toward Bio-Based Coatings Reduces Legacy Chemical Demand

For complete list of drivers and restraints, kindly check the Table Of Contents.

#### Segment Analysis

Conversion coatings generated 42.39% of 2025 revenue within the surface treatment chemicals market, anchored by automotive, aerospace, and general-industrial paint lines. Cleaners are projected to post the fastest 6.77% CAGR as semiconductor packaging plants and additive-manufacturing hubs demand ultra-low residue baths. This divergence signals a bifurcation: commodity phosphate-based conversions attract volume but modest margins, whereas precision cleaners command high price points due to purity and selectivity thresholds. Regulators are driving a shift to zirconium and titanium systems that lower sludge and energy usage, further differentiating suppliers that possess strong formulation IP. Specialty players leverage bundled cleaner-conversion packages to lock in multi-year plant audits, limiting churn.

Second-generation anodizing additives for aluminum battery enclosures strengthen wear resistance while maintaining weldability. Other types, including bio-derived sealers and chromium-free hybrid films, address niche specifications in medical instruments and wind-turbine blades. As OEMs standardize global material specifications, suppliers that offer consistent chemistries across continents win master-service agreements. Consequently, the surface treatment chemicals market sees a migration of research budgets toward additive packages that improve bath longevity, foaming control, and wastewater treatability, intensifying competition on lifecycle cost rather than per-liter pricing.

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The Surface Treatment Chemicals Report is Segmented by Chemical Type (Cleaner, Chemical Conversion Coating, and More), Base Material (Metal, Plastic and Other Materials), End-User Industry (Automotive, Construction, Electronics, Industrial Machinery, and Others), and Geography (Asia-Pacific, North America, Europe, South America, and Middle-East and Africa). The Market Forecasts are Provided in Terms of Value (USD).

## Geography Analysis

Asia-Pacific contributed 42.88% of 2025 revenue within the surface treatment chemicals market and is expanding at a 7.05% CAGR to 2031. China forecasts a profit rebound for its chemical producers in 2025 amid a domestic stimulus that boosts EV supply chains. India's specialty-chemical turnover is scheduled to reach USD 300 billion in 2025, feeding demand for high-value coatings used in smart-phone assembly and automotive exports.

North America is reinforcing its industrial base through the USD 1.2 trillion Infrastructure Investment and Jobs Act, which underpins heavy-equipment and bridge-coating demand. Semiconductor fabs in Arizona, Texas, and New York fuel localized consumption of ultra-pure cleaners that meet Class 1 cleanroom thresholds. Canada's offshore wind supply-chain build-out further widens the need for ISO 20340-certified coatings. Although growth rates trail Asia, premium margin opportunities arise from tight environmental regulations and proximity to research and development clusters.

Europe retains technological leadership in offshore energy and aerospace. The implementation of NORSOK M-501 Rev 7 in 2025 demands coatings validated for long-term immersion and fire exposure. Green-deal policies advance bio-based chemistries; Germany and Scandinavia subsidize lignin-derived resins, accelerating the phase-out of solvent-borne chromates. South America and Middle East Africa are emerging at different paces: Brazil's pre-salt oilfields require high-temperature corrosion inhibitors, while Gulf Cooperation Council states invest in aluminum rolling mills linked to automotive export corridors. Although combined volumes remain modest, local production mandates push multinational suppliers to establish service hubs, unlocking early-mover advantages as industrialization accelerates.

## List of Companies Covered in this Report:

Aalberts Surface Technologies GmbH ALANOD GmbH and Co. KG Asterion LLC BASF Bulk Chemicals Inc. ChemTech Surface Finishing Pvt. Ltd. Dow Element Solutions Inc Henkel AG and Co. KGaA MKS | Atotech Nihon Parkerizing Co., Ltd. Nippon Paint Holdings Co. Ltd. OC Oerlikon Management AG PPG Industries, Inc. Quaker Chemical Corporation The Sherwin-Williams Company YUKEN INDUSTRY CO.,LTD.

## Additional Benefits:

- <ul> The market estimate (ME) sheet in Excel format
- 3 months of analyst support </ul>

## Table of Contents:

- 1 Introduction
  - 1.1 Study Assumptions and Market Definition
  - 1.2 Scope of the Study
- 2 Research Methodology
- 3 Executive Summary

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- 4 Market Landscape
  - 4.1 Market Overview
  - 4.2 Market Drivers
    - 4.2.1 Rapid Expansion of Automotive Production in Asia
    - 4.2.2 Electronics Miniaturisation Demanding High-Precision Plating
    - 4.2.3 Stringent Anti-Corrosion Standards in Wind-Turbine Towers
    - 4.2.4 On-Site 3D-Printed Metal Parts Requiring Post-Print Surface Prep
    - 4.2.5 Surge in Aluminium Use in EV Platforms Necessitating Multi-Metal Cleaners
  - 4.3 Market Restraints
    - 4.3.1 Regulatory Clamp-Down on Hexavalent Chromium
    - 4.3.2 Shift Toward Bio-Based Coatings Reduces Legacy Chemical Demand
    - 4.3.3 Rising Total-Cost-of-Ownership of Captive Metal Finishing Lines
  - 4.4 Value Chain Analysis
  - 4.5 Porter's Five Forces
    - 4.5.1 Bargaining Power of Suppliers
    - 4.5.2 Bargaining Power of Buyers
    - 4.5.3 Threat of New Entrants
    - 4.5.4 Threat of Substitutes
    - 4.5.5 Degree of Competition

## 5 Market Size and Growth Forecasts (Value)

- 5.1 By Chemical Type
  - 5.1.1 Cleaner
  - 5.1.2 Chemical Conversion Coating
  - 5.1.3 Anodizing Chemicals
  - 5.1.4 Other Types of Chemicals
- 5.2 By Base Material
  - 5.2.1 Metal
  - 5.2.2 Plastic
  - 5.2.3 Other Base Materials (Glass, Alloys, Wood)
- 5.3 By End-User Industry
  - 5.3.1 Automotive and Transportation
  - 5.3.2 Construction
  - 5.3.3 Electronics
  - 5.3.4 Industrial Machinery
  - 5.3.5 Others (Oil and Gas Pipeline, Power, Military, Packaging, etc.)
- 5.4 Geography
  - 5.4.1 Asia-Pacific
    - 5.4.1.1 China
    - 5.4.1.2 India
    - 5.4.1.3 Japan
    - 5.4.1.4 South Korea
    - 5.4.1.5 ASEAN
    - 5.4.1.6 Rest of Asia-Pacific
  - 5.4.2 North America
    - 5.4.2.1 United States

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- 5.4.2.2 Canada
- 5.4.2.3 Mexico
- 5.4.3 Europe
  - 5.4.3.1 Germany
  - 5.4.3.2 United Kingdom
  - 5.4.3.3 France
  - 5.4.3.4 Italy
  - 5.4.3.5 Spain
  - 5.4.3.6 Russia
  - 5.4.3.7 Rest of Europe
- 5.4.4 South America
  - 5.4.4.1 Brazil
  - 5.4.4.2 Argentina
  - 5.4.4.3 Rest of South America
- 5.4.5 Middle-East and Africa
  - 5.4.5.1 Saudi Arabia
  - 5.4.5.2 South Africa
  - 5.4.5.3 Rest of Middle-East and Africa

## 6 Competitive Landscape

### 6.1 Market Concentration

### 6.2 Strategic Moves

### 6.3 Market Share (%)/Ranking Analysis

6.4 Company Profiles (includes Global level Overview, Market level overview, Core Segments, Financials as available, Strategic Information, Market Rank/Share for key companies, Products and Services, and Recent Developments)

#### 6.4.1 Aalberts Surface Technologies GmbH

#### 6.4.2 ALANOD GmbH and Co. KG

#### 6.4.3 Asterion LLC

#### 6.4.4 BASF

#### 6.4.5 Bulk Chemicals Inc.

#### 6.4.6 ChemTech Surface Finishing Pvt. Ltd.

#### 6.4.7 Dow

#### 6.4.8 Element Solutions Inc

#### 6.4.9 Henkel AG and Co. KGaA

#### 6.4.10 MKS | Atotech

#### 6.4.11 Nihon Parkerizing Co., Ltd.

#### 6.4.12 Nippon Paint Holdings Co. Ltd.

#### 6.4.13 OC Oerlikon Management AG

#### 6.4.14 PPG Industries, Inc.

#### 6.4.15 Quaker Chemical Corporation

#### 6.4.16 The Sherwin-Williams Company

#### 6.4.17 YUKEN INDUSTRY CO.,LTD.

## 7 Market Opportunities and Future Outlook

### 7.1 White-space and Unmet-Need Assessment

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