

Global Trivalent Chromium Black Passivate Supply, Demand and Key Producers, 2026-2032

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Abstracts

The global Trivalent Chromium Black Passivate market size is expected to reach \$ 203 million by 2032, rising at a market growth of 5.1% CAGR during the forecast period (2026-2032).

In 2025, global sales volume of black trivalent chromium passivate was approximately 17,000 tons. The mainstream ex-factory price was about US\$8.2/kg, and the gross margin of major manufacturers was approximately 32%-48%. The market is expected to grow at a CAGR of about 5.2% from 2026 to 2032.

Black trivalent chromium passivate is environmentally friendly passivation chemicals used for post-treatment of metallic coatings such as zinc, zinc-nickel alloy and zinc-iron alloy coatings. Their main function is to form a black or deep-black trivalent chromium passivation film on electroplated components, thereby improving corrosion resistance, appearance consistency and compatibility with subsequent sealing treatment. Compared with conventional hexavalent chromium black passivation, black trivalent chromium passivates do not rely on hexavalent chromium as the core film-forming system, making them more compliant with the requirements of the automotive, electrical and electronics, and export-oriented industrial product sectors for hexavalent-chromium-free, low-heavy-metal and environmentally friendly surface treatment. This product is neither an electroplating bath nor a sealer, but a black passivation post-treatment chemical used after electroplating, and is often applied together with zinc-nickel alloy coatings and high-corrosion-resistance sealers.

The upstream supply chain mainly includes trivalent chromium salts, complexing agents, film-forming accelerators, organic acids, pH regulators, stabilizers, wetting agents, black film-forming auxiliary components and basic chemicals for water

treatment. Among these, trivalent chromium salts and the complexing system determine the basis of passivation film formation; film-forming accelerators and stabilizers affect film uniformity, color depth and bath stability; while wetting agents and auxiliary components help reduce color variation, flow marks, blooming and localized passivation defects. Downstream applications mainly include automotive parts, industrial machinery, transportation equipment, electrical and electronics, and other metal components requiring black appearance or high corrosion resistance. Typical end uses include automotive fasteners, chassis parts, braking system components, engineering machinery connectors, rail transit parts, electrical structural components, cabinet hardware and general hardware parts.

This report studies the global Trivalent Chromium Black Passivate production, demand, key manufacturers, and key regions.

This report is a detailed and comprehensive analysis of the world market for Trivalent Chromium Black Passivate and provides market size (US\$ million) and Year-over-Year (YoY) Growth, considering 2025 as the base year. This report explores demand trends and competition, as well as details the characteristics of Trivalent Chromium Black Passivate that contribute to its increasing demand across many markets.

Highlights and key features of the study

Global Trivalent Chromium Black Passivate total production and demand, 2021-2032, (Tons)

Global Trivalent Chromium Black Passivate total production value, 2021-2032, (USD Million)

Global Trivalent Chromium Black Passivate production by region & country, production, value, CAGR, 2021-2032, (USD Million) & (Tons), (based on production site)

Global Trivalent Chromium Black Passivate consumption by region & country, CAGR, 2021-2032 & (Tons)

U.S. VS China: Trivalent Chromium Black Passivate domestic production, consumption, key domestic manufacturers and share

Global Trivalent Chromium Black Passivate production by manufacturer, production, price, value and market share 2021-2026, (USD Million) & (Tons)

Global Trivalent Chromium Black Passivate production by Type, production, value, CAGR, 2021-2032, (USD Million) & (Tons)

Global Trivalent Chromium Black Passivate production by Application, production, value, CAGR, 2021-2032, (USD Million) & (Tons)

This report profiles key players in the global Trivalent Chromium Black Passivate market

based on the following parameters - company overview, production, value, price, gross margin, product portfolio, geographical presence, and key developments. Key companies covered as a part of this study include Atotech, MacDermid Enthone Industrial Solutions, SurTec, PAVCO, Columbia Chemical, Dipsol Chemicals, Dr. Hesse, Nippon Hyomen Kagaku, Technic, Galvano Mondo, etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals.

Stakeholders would have ease in decision-making through various strategy matrices used in analyzing the World Trivalent Chromium Black Passivate market

Detailed Segmentation:

Each section contains quantitative market data including market by value (US\$ Millions), volume (production, consumption) & (Tons) and average price (US\$/kg) by manufacturer, by Type, and by Application. Data is given for the years 2021-2032 by year with 2025 as the base year, 2026 as the estimate year, and 2027-2032 as the forecast year.

Global Trivalent Chromium Black Passivate Market, By Region:

United States

China

Europe

Japan

South Korea

ASEAN

India

Rest of World

Global Trivalent Chromium Black Passivate Market, Segmentation by Type:

Zinc Plating Type

Zinc-Nickel Alloy Plating Type

Zinc-Iron Alloy Plating Type

Global Trivalent Chromium Black Passivate Market, Segmentation by Performance Grade:

Standard Corrosion Resistance Type

High Corrosion Resistance Type

Ultra-High Corrosion Resistance Type

Global Trivalent Chromium Black Passivate Market, Segmentation by Application:

Automotive Part

Industrial Machinery

Transportation Equipment

Electrical and Electronic

Other

Companies Profiled:

Atotech

MacDermid Enthone Industrial Solutions

SurTec

PAVCO

Columbia Chemical

Dipsol Chemicals

Dr. Hesse

Nippon Hyomen Kagaku

Technic

Galvano Mondo

Artek Surfin Chemicals

MAR-Tech Holdings

Guangzhou Sanfu New Materials Technology

Guangdong Bigely Technology

Guangdong Dazhi Chemical Technology

Anhui Dingwang Environmental Protection Materials Technology

Hangzhou Dongfang Surface Technology

Guangzhou Chuanfu Chemical

Key Questions Answered:

1. How big is the global Trivalent Chromium Black Passivate market?
2. What is the demand of the global Trivalent Chromium Black Passivate market?
3. What is the year over year growth of the global Trivalent Chromium Black Passivate market?
4. What is the production and production value of the global Trivalent Chromium Black Passivate market?

5. Who are the key producers in the global Trivalent Chromium Black Passivate market?
6. What are the growth factors driving the market demand?

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