

Global Bis(ethylcyclopentadienyl)ruthenium(II) Market Growth 2026-2032

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Abstracts

The global Bis(ethylcyclopentadienyl)ruthenium(II) market size is predicted to grow from US\$ 134 million in 2025 to US\$ 284 million in 2032; it is expected to grow at a CAGR of 11.4% from 2026 to 2032.

In 2025, global sales volume of Bis(ethylcyclopentadienyl)ruthenium(II) was approximately 18 metric tons, with an average ex-works selling price of about USD 7,600 per kilogram. Gross margin among major manufacturer was generally around 30%–45%.

Bis(ethylcyclopentadienyl)ruthenium(II) is an organoruthenium compound with CAS number 32992-96-4 and the molecular formula $C_{10}H_{12}Ru$. Its molecular structure consists of a divalent ruthenium center coordinated with two ethyl-substituted cyclopentadienyl ligand. It generally appears as a pale yellow liquid at room temperature and offers favorable volatility, thermal stability and liquid-delivery performance. Compared with ruthenocene, ethyl substitution lowers the melting point and improves vapor-delivery characteristics, making the compound particularly suitable as a liquid ruthenium precursor for vapor-phase deposition.

The principal application of Bis(ethylcyclopentadienyl)ruthenium(II) is semiconductor thin-film deposition. It is used as a ruthenium precursor in ALD, PEALD and CVD processes to deposit metallic ruthenium, ruthenium oxide and other ruthenium-based film. Major end use includes advanced logic-chip interconnect, contact layer, barrier layer, copper-interconnect seed layer and DRAM capacitor electrode. The product is also used in functional-film research for OLED and other display device, ruthenium-based functional material preparation, fine chemical and organometallic compound synthesis, and environmental catalytic material research.

United States market for Bis(ethylcyclopentadienyl)ruthenium(II) is estimated to increase from US\$ million in 2025 to US\$ million by 2032, at a CAGR of % from 2026 through 2032.

China market for Bis(ethylcyclopentadienyl)ruthenium(II) is estimated to increase from US\$ million in 2025 to US\$ million by 2032, at a CAGR of % from 2026 through 2032.

Europe market for Bis(ethylcyclopentadienyl)ruthenium(II) is estimated to increase from US\$ million in 2025 to US\$ million by 2032, at a CAGR of % from 2026 through 2032.

Global key Bis(ethylcyclopentadienyl)ruthenium(II) players cover Air Liquide, Umicore, Strem Chemicals, Dockweiler Chemicals, Kojundo Chemical Laboratory, etc. In terms of revenue, the global two largest companies occupied for a share nearly % in 2025.

Report Scope

LP Information, Inc. (LPI) ' newest research report, the "Bis(ethylcyclopentadienyl)ruthenium(II) Industry Forecast" looks at past sales and reviews total world Bis(ethylcyclopentadienyl)ruthenium(II) sales in 2025, providing a comprehensive analysis by region and market sector of projected Bis(ethylcyclopentadienyl)ruthenium(II) sales for 2026 through 2032. With Bis(ethylcyclopentadienyl)ruthenium(II) sales broken down by region, market sector and sub-sector, this report provides a detailed analysis in US\$ millions of the world Bis(ethylcyclopentadienyl)ruthenium(II) industry.

This Insight Report provides a comprehensive analysis of the global Bis(ethylcyclopentadienyl)ruthenium(II) landscape and highlights key trends related to product segmentation, company formation, revenue, and market share, latest development, and M&A activity. This report also analyzes the strategies of leading global companies with a focus on Bis(ethylcyclopentadienyl)ruthenium(II) portfolios and capabilities, market entry strategies, market positions, and geographic footprints, to better understand these firms' unique position in an accelerating global Bis(ethylcyclopentadienyl)ruthenium(II) market.

This Insight Report evaluates the key market trends, drivers, and affecting factors shaping the global outlook for Bis(ethylcyclopentadienyl)ruthenium(II) and breaks down the forecast by Type, by Application, geography, and market size to highlight emerging pockets of opportunity. With a transparent methodology based on hundreds of bottom-

up qualitative and quantitative market inputs, this study forecast offers a highly nuanced view of the current state and future trajectory in the global Bis(ethylcyclopentadienyl)ruthenium(II).

This report presents a comprehensive overview, market shares, and growth opportunities of Bis(ethylcyclopentadienyl)ruthenium(II) market by product type, application, key manufacturers and key regions and countries.

Market Segmentation

Segmentation by Type:

High-Purity Grade (Purity ≥99%)

Electronic Grade (Purity ≥98%)

Segmentation by Synthesis Process:

Direct Coordination Synthesis

Ruthenocene Ethylation

Ligand Exchange

Segmentation by Application:

Semiconductor Thin-Film Deposition

OLED Display Material

Fine Chemical Synthesis

Functional Material Preparation

Environmental Catalysis

Other

This report also splits the market by region:

Americas

United States

Canada

Mexico

Brazil

APAC

China

Japan

Korea

Southeast Asia

India

Australia

Europe

Germany

France

UK

Italy

Russia

Middle East & Africa

Egypt

South Africa

Israel

Turkey

GCC Countries

The below companies that are profiled have been selected based on inputs gathered from primary experts and analysing the company's coverage, product portfolio, its market penetration.

Air Liquide

Umicore

Strem Chemicals

Dockweiler Chemicals

Kojundo Chemical Laboratory

Pegasus Chemicals

Gelest

Colonial Metals

IChems

Anhui Adchem Semiconductor Technology

Fujian Charming Material Technology

Yurui (Shanghai) Chemical

Key Questions Addressed in this Report

What is the 10-year outlook for the global Bis(ethylcyclopentadienyl)ruthenium(II) market?

What factors are driving Bis(ethylcyclopentadienyl)ruthenium(II) market growth, globally and by region?

Which technologies are poised for the fastest growth by market and region?

How do Bis(ethylcyclopentadienyl)ruthenium(II) market opportunities vary by end market size?

How does Bis(ethylcyclopentadienyl)ruthenium(II) break out by Type, by Application?

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