Epichlorohydrin Market Size and Share Outlook - Forecast Trends and Growth Analysis Report (2025-2034)

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Report description:

The global epichlorohydrin market attained a value of nearly USD 3.00 Billion in 2024 and is poised for further growth. The market is expected to expand at a CAGR of 3.50 % during the forecast period of 2025-2034 , reaching USD 4.23 Billion by 2034 .

Epichlorohydrin is a key raw material in the production of epoxy resins, which are widely used across end-use industries. These industries, including building and construction, automotive, renewable energy, and paints and coatings, drive the demand for epichlorohydrin. The increasing need for advanced materials in these sectors is expected to fuel the continued growth of the epichlorohydrin market.

The epichlorohydrin (ECH) market is driven by the growing demand for epoxy resins , particularly in paints and coatings, and building and construction industries. Epoxy resin usage in these sectors continues to rise, fuelled by economic growth in the Asia Pacific and emerging countries. As the demand for durable materials increases, the market for epichlorohydrin is expected to expand significantly, supported by its vital role in producing epoxy resins across various applications.

Epichlorohydrin (ECH) manufacturing traditionally uses propylene as a raw material or starting material. However, rising demand for bio-based products has led to glycerin-based epichlorohydrin production using renewable feedstock. This shift in manufacturing reflects growing interest in sustainable ECH alternatives. INOVYN launched REODRIN, the world's first bio-attributed epichlorohydrin, in 2021. Made from renewable feedstock in France, it used 99% less land and water and cut greenhouse gas emissions by 70%.

The epichlorohydrin (ECH) market is witnessing steady market growth, driven by the shift from traditional propylene to alternative raw materials such as raw glycerin and glycerol. These environmentally friendly options align with the current green trend and sustainable engineering practices. Raw material innovation is reshaping ECH manufacturing, especially in developing countries, with a strong focus on Eastern Europe and Asia. The availability of renewable raw material sources and growing demand for

eco-conscious products are expected to further drive market expansion in line with global sustainability goals.

The epichlorohydrin market is experiencing growth due to rising demand in epoxy resin industries and the polycarbonate sector. ECH plays a key role in these applications. In the Asia Pacific, stricter environmental regulations and the adoption of new technologies are driving significant developments. These factors collectively support market expansion while encouraging sustainable practices within key industrial regions and applications. Advanced Biochemical Thailand launched EPINITY, a bio-based epichlorohydrin, in 2022 to support carbon reduction goals. It targeted advanced composites and epoxy resin applications, reinforcing ABT's sustainability leadership and ten years of ECH production.

Application Insights

Epoxy resins, produced using epichlorohydrin, are valued for their exceptional mechanical strength, chemical resistance, and adhesive properties. Widely used in coatings, electronics, and composite materials, they support infrastructure, automotive, and renewable energy sectors. Swancor launched EzCiclo, a recyclable thermosetting epoxy resin, in 2022 to address wind turbine blade waste. Combined with CleaVER technology, it enabled fibre and resin reuse without pollution, supporting net-zero goals.

Synthetic glycerine serves as a consistent and high-purity feedstock in bio-based epichlorohydrin production. Compared to conventional propylene routes, it offers a more sustainable alternative, reducing carbon footprint and reliance on fossil fuels. Its use enhances process efficiency and product quality, contributing to the green transformation of the epichlorohydrin market and aligning with global sustainability targets and regulations.

Elastomers derived from epichlorohydrin provide excellent oil, chemical, and ozone resistance, making them ideal for automotive seals, gaskets, and industrial components. Their flexibility and resilience under extreme conditions support safety and performance in critical applications. ZEON offers a range of Hydrin epichlorohydrin polymers, including homopolymers and copolymers, used in fuel-resistant applications such as automobile gaskets, hoses, diaphragms, and anti-static printer rolls.

Water treatment chemicals made from epichlorohydrin are essential for improving water quality in industrial and municipal systems. These chemicals enable effective removal of contaminants and ensure compliance with environmental standards. Their role in safeguarding public health and promoting clean water access supports rising demand, making them an important segment of the global epichlorohydrin market.

Processes Insights

The allyl chloride route is a widely used method for producing epichlorohydrin. This process involves reacting propylene with chlorine to form allyl chloride, which is then reacted with hydroxide to yield epichlorohydrin. The key benefit of this route is its cost-effectiveness and high production yield, making it a dominant method in large-scale industrial applications. It also offers established infrastructure, which reduces operational challenges. The Google patent describes a process for producing epichlorohydrin by reacting allyl chloride with hydrogen peroxide, using allyl chloride with less than 2000 ppm 1,5-hexadiene. This method ensures higher purity of epichlorohydrin, improving efficiency and product quality.

The allyl alcohol route for producing epichlorohydrin involves the reaction of allyl alcohol with chlorine. This process provides a more environmentally friendly alternative compared to the Allyl Chloride Route, with reduced hazardous by-products. One of the main benefits is the use of renewable feedstocks, which contributes to lower CO2 emissions and improved sustainability. The Allyl Alcohol Route is particularly useful in producing epichlorohydrin for specialty applications, including those requiring higher purity levels. Additionally, this method aligns with increasing global demands for greener, more sustainable manufacturing processes in industries such as wind energy, automotive, and electronics.

Type Insights

Petro-based epichlorohydrin, traditionally derived from propylene, benefits from established supply chains and mature infrastructure, ensuring consistent production and cost efficiency. It offers high purity levels and well-understood processing conditions, making it ideal for large-scale industrial use, especially in epoxy resins for automotive, construction , and electronics sectors. Its proven reliability and broad application base make it a competitive option, particularly in regions with strong petrochemical industries. AGC Vinythai introduced EPINITY, a bio-based epichlorohydrin made from 100% renewable glycerine. It offered environmental and operational advantages, and replaced petro-based ECH in various applications, certified by recognised sustainability standards.

Bio-based epichlorohydrin, produced from renewable glycerine, offers significant environmental advantages, including reduced greenhouse gas emissions, lower water usage, and decreased reliance on fossil fuels. It supports circular economy goals and enhances sustainability credentials for manufacturers using it in epoxy resins. This route enables diversification of raw material sources and aligns with growing regulatory and consumer pressure for greener chemicals. Particularly attractive in regions promoting carbon neutrality, bio-based ECH helps companies reduce their carbon footprint. Its appeal is rising across the packaging, coatings, and electronics sectors where eco-conscious sourcing is valued. Bio-based epichlorohydrin strengthens green supply chains for the future global market.

End Use Insights

Epichlorohydrin played a key role in the textile industry by enhancing fibre strength and chemical resistance. It was used in producing wet-strength resins and textile finishing agents, improving durability and performance of fabrics during laundering and industrial use. ECH-based compounds enabled superior bonding and reduced fabric shrinkage, particularly in technical textiles and non-wovens. Its compatibility with a range of fibres, including cotton and synthetics, made it valuable in dyeing and treatment processes. As global demand for high-performance and sustainable textiles grew, ECH's role in creating durable, functional textiles contributed significantly to its global market expansion.

In pharmaceuticals, epichlorohydrin served as a crucial intermediate for synthesising active pharmaceutical ingredients (APIs) and specialty drug compounds. Its ability to modify starches and cellulose enabled the production of drug delivery systems and controlled-release formulations. ECH-derived polymers supported the development of excipients and binders used in tablet formation. Moreover, it played a role in creating stabilisers for vaccines and therapeutic agents. With increasing global healthcare needs and innovation in drug delivery, demand for ECH in pharmaceutical manufacturing supported market growth. Meghmani Finechem commissioned India's first epichlorohydrin plant in June 2022, with an annual capacity of 50,000 tonnes. The plant used a glycerol-based process, reducing energy, water usage, and carbon emissions. It aimed to lower India's import dependence and support various industries, including pharmaceuticals, paints, and electronics.

Regional Insights

North America offered strong growth prospects for the epichlorohydrin market due to robust demand from the aerospace, automotive, and electronics industries. The region's advanced technological infrastructure and high R&D investment facilitated innovation in epoxy resins and derivatives. Stringent environmental regulations also drove the shift towards bio-based ECH, enhancing sustainability profiles. The presence of major market players and well-established distribution networks ensured reliability and scalability. The Canadian government assessed epichlorohydrin as harmful to human health due to its potential carcinogenic effects but not harmful to the environment. Risk management actions were taken, including its removal from food additives, stricter cosmetic regulations, and ongoing monitoring under environmental legislation.

Europe played a pivotal role in driving the shift to sustainable epichlorohydrin production, largely influenced by its strict

environmental regulations and carbon reduction goals. The region embraced bio-based processes, such as those using glycerine, helping to lower the ecological footprint of ECH manufacturing. Its strong chemical and automotive sectors created consistent demand for ECH-based epoxy resins. Innovation in circular economy models and government-backed green initiatives boosted investment in cleaner technologies. Furthermore, Europe's regulatory transparency and cross-border collaboration enhanced market trust, making it a prime destination for companies aiming to meet global sustainability targets and access a mature, innovation-driven market.

Asia Pacific emerged as the fastest-growing region in the global epichlorohydrin market due to rapid industrialisation, urbanisation, and expanding automotive and electronics sectors. Countries like China, India, and South Korea significantly increased ECH production capacity, reducing reliance on imports and lowering costs. High demand for epoxy resins in infrastructure and renewable energy projects further fuelled regional consumption. Supportive government policies and growing investment in bio-based chemical production reinforced the region's strategic importance. Aditya Birla Chemicals (Thailand) produces epichlorohydrin, chlor-alkali, epoxy resins, phosphates, and sulphites. With global reach and advanced technologies, it became a top epoxy player and the largest powdered sulphite producer worldwide, exporting extensively across Asia Pacific, ASEAN, and Australia.

Latin America held strategic potential in the global epichlorohydrin market, supported by its increasing focus on industrial development and sustainability. Brazil and Argentina demonstrated growing interest in renewable chemicals, especially bio-based ECH, due to abundant natural resources like glycerine from biodiesel production. Infrastructure and construction activities drove demand for epoxy resins in paints, coatings, and adhesives. Investment incentives, trade agreements, and improving regulatory frameworks encouraged international collaboration. Although a smaller market compared to others, Latin America's proximity to raw materials and rising green awareness positioned it as an emerging player in sustainable ECH production and downstream applications across key industries.

The Middle East and Africa epichlorohydrin market has shown steady growth, driven by rising water treatment, automotive, and construction demand. Increased infrastructure development, along with expanding chemical and resin industries in countries like Saudi Arabia, the UAE, and South Africa, has boosted consumption of epichlorohydrin, particularly in epoxy resin production. However, limited local manufacturing capacity and reliance on imports may restrain growth to some extent. Epichlorohydrin for Synthesis 98.5% was supplied globally by Kenya Chemical, with key uses in epoxy resins, glycerol, elastomers, and surfactants. It served various industries, acting as a versatile solvent and precursor in organic synthesis. It was available in bulk and small packs.

Key Companies & Market Share Insights

Key companies in the global epichlorohydrin market include Dow Chemical Company, Solvay S.A., AGC Inc., Samsung Fine Chemicals, and Aditya Birla Chemicals. These players have focused on strategic expansions, product innovations, and sustainable production technologies, such as bio-based epichlorohydrin, to strengthen their market positions. Market share is largely influenced by production capacity, regional presence, technological advancements, and regulatory compliance. With increasing demand across industries like automotive, electronics, and construction, these companies continue to invest in research and development. The competitive landscape remains dynamic, with partnerships and acquisitions playing a crucial role in consolidating market share and expanding global reach.

? Solvay S.A.
? LOTTE Fine Chemical Co., Ltd.
? Olin Corporation
? Aditya Birla Chemicals
? Sumitomo Chemical Co., Ltd.
? Nama Chemicals Company

? AGC Inc.
? Samsung Fine Chemicals
? Dow Chemical Company
? Shandong Haili Chemical Industry Co. Ltd.
? Others

Segments Covered in the Report

The global epichlorohydrin market report covered key segments based on feedstock type, application, and region. This segmentation helped assess market dynamics, demand trends, and growth opportunities within each category.

Type Outlook (Revenue, Billion, 2025-2034)

? Petro Based
? Bio Based

Processes Outlook (Revenue, Billion, 2025-2034)

? Allyl Chloride Route
? Allyl Alcohol Route
? Glycerine Route

Application Outlook (Revenue, Billion, 2025-2034)

? Epoxy Resins
? Synthetic Glycerine
? Elastomers
? Water Treatment Chemicals
? Others

End Use Outlook (Revenue, Billion, 2025-2034)

? Paint and Coating
? Adhesives
? Textiles
? Pharmaceuticals
? Construction
? Others

Region Outlook (Revenue, Billion, 2025-2034)

? North America
??? United States of America
??? Canada

? Europe
??? United Kingdom

??? Germany
??? France
??? Italy
??? Others

? Asia Pacific
??? China
??? Japan
??? India
??? ASEAN
??? Australia
??? Others

? Latin America
??? Brazil
??? Argentina
??? Mexico
??? Others

? Middle East and Africa

??? Saudi Arabia
??? United Arab Emirates
??? Nigeria
??? South Africa
??? Others

Table of Contents:

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