+357 96 030922
info@marketpublishers.com

Global Bio-based Propylene Glycol Market Size study, by Source, Grade, End-use Industry and Regional Forecasts 2022-2032

https://marketpublishers.com/r/G3F66DF13E5EEN.html
Date: April 2025
Pages: 285
Price: US$ 3,218.00 (Single User License)
ID: G3F66DF13E5EEN

Abstracts

The Global Bio-based Propylene Glycol Market is valued at approximately USD 4.5 billion in 2023 and is anticipated to grow with a steady CAGR of more than 4.4% over the forecast period 2024-2032. As industries worldwide increasingly commit to decarbonizing operations, bio-based propylene glycol (PG) has emerged as a compelling alternative to petroleum-derived glycols. Synthesized primarily from renewable feedstocks such as glycerol and sorbitol, bio-based PG offers comparable physical properties while aligning with global sustainability benchmarks. This renewable compound finds expansive utility across several industrial sectors—ranging from antifreeze and deicing formulations in transportation, to solvents and humectants in cosmetics and food processing—thereby reinforcing its relevance in a circular, low-carbon economy.

The expanding demand for eco-friendly ingredients across personal care, pharmaceuticals, and construction materials has significantly amplified interest in bio-based PG. Governments across North America, Europe, and parts of Asia have rolled out incentives, mandates, and product labeling regulations to encourage the adoption of green chemicals, nudging manufacturers to integrate biobased raw materials into their portfolios. At the same time, advancements in catalytic hydrogenolysis and fermentation technologies are making it increasingly economical to convert biomass into high-purity propylene glycol at scale. However, the market is still contending with cost competitiveness versus fossil-based alternatives, supply chain volatility of agricultural raw materials, and performance limitations in high-stress applications like automotive and aerospace.

In response to these constraints, chemical innovators are investing heavily in process

optimization and hybrid-grade formulations to improve shelf stability, thermal resistance, and cost-efficiency of bio-based PG. Several market players are entering into strategic alliances and long-term procurement contracts with agricultural cooperatives and biotech firms to secure reliable biomass supplies. Moreover, pharmaceutical and food companies are validating bio-based PG under strict regulatory conditions such as USP and FCC standards—an indication of rising confidence in its viability for sensitive applications. As bio-based PG achieves parity in performance and compliance, it is expected to capture increased share in industrial lubricants, plasticizers, paints, and coatings as well.

Market adoption is particularly robust in the transportation and construction sectors, where sustainability-linked procurement policies are influencing supplier choices. In building materials, bio-based PG is gaining traction in polyol and insulation foam manufacturing, driven by zero-VOC and low-carbon product certifications. Similarly, personal care and cosmetic brands are reformulating their legacy SKUs with bio-based PG for cleaner labels and to meet the growing expectations of ethically conscious consumers. The food and beverage industry is also leaning into PG’s role as a solvent and carrier in flavor systems, food colorants, and emulsifiers—further adding to its value proposition across end-use verticals.

Regionally, North America dominated the global bio-based propylene glycol market in 2023, led by the U.S., where supportive environmental regulations and growing demand for sustainable consumer goods are catalyzing growth. Europe remains another influential contributor, particularly due to aggressive climate targets and strong demand from the automotive and food sectors. Meanwhile, the Asia Pacific region is projected to witness the highest CAGR over the forecast period, with countries like China, India, and Japan investing in domestic bio-refinery projects to reduce reliance on petrochemical imports. Latin America and the Middle East & Africa are expected to gradually pick up momentum as bio-based PG penetrates agrochemical and construction material applications in these developing economies.

Major market player included in this report are:

The Dow Chemical Company

ADM (Archer Daniels Midland)

LyondellBasell Industries

+357 96 030922
info@marketpublishers.com

BASF SE

DuPont de Nemours, Inc.

Cargill, Incorporated

Huntsman Corporation

Oleon NV

Ashland Global Holdings Inc.

INEOS Oxide

SK picglobal Co., Ltd.

Global Bio-chem Technology Group Company Limited

Zouping Fenlian Chemical Co., Ltd.

Braskem S.A.

Manali Petrochemicals Limited

The detailed segments and sub-segment of the market are explained below:

By Source:

Petroleum-based

Bio-based

By Grade:

Industrial

Pharmaceutical

+357 96 030922
info@marketpublishers.com

By End-use Industry:

- Transportation
- Building & Construction
- Food & Beverage
- Pharmaceuticals
- Cosmetics & Personal Care

By Region:

North America

- U.S.
- Canada

Europe

- UK
- Germany
- France
- Spain
- Italy
- Rest of Europe

Asia Pacific

China

India

Japan

Australia

South Korea

Rest of Asia Pacific

Latin America

Brazil

Mexico

Rest of Latin America

Middle East & Africa

Saudi Arabia

South Africa

Rest of Middle East & Africa

Years considered for the study are as follows:

Historical year – 2022

Base year – 2023

Forecast period – 2024 to 2032

Key Takeaways:

Market Estimates & Forecast for 10 years from 2022 to 2032.

Annualized revenues and regional level analysis for each market segment.

Detailed analysis of geographical landscape with Country level analysis of major regions.

Competitive landscape with information on major players in the market.

Analysis of key business strategies and recommendations on future market approach.

Analysis of competitive structure of the market.

Demand side and supply side analysis of the market.

+357 96 030922
info@marketpublishers.com

Contents

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

CHAPTER 10. RESEARCH PROCESS

+357 96 030922
info@marketpublishers.com

List Of Tables

LIST OF TABLES

This list is not complete; the final report does contain more than 100 tables. The list may be updated in the final deliverable.

+357 96 030922
info@marketpublishers.com

I would like to order

Product name: Global Bio-based Propylene Glycol Market Size study, by Source, Grade, End-use Industry and Regional Forecasts 2022-2032

Product link: https://marketpublishers.com/r/G3F66DF13E5EEN.html

Price: US$ 3,218.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:
info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page https://marketpublishers.com/r/G3F66DF13E5EEN.html