

## **Green Solvents: Technologies, Emerging Opportunities and Markets**

Market Research Report | 2024-10-08 | 119 pages | BCC Research

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### **Report description:**

#### Description

#### Report Scope

This report analyzes the global market for green solvents by segmenting it based on material, application and region. These market segments are analyzed at the global and regional levels. The base year for this analysis is 2023 and market estimates and forecasts are given from 2024 through 2029. The market estimates are provided in terms of volume (kilo tons) and revenue (\$ millions).

Based on material, the market is segmented into:

- Bio-based alcohol, glycol, diols.
- D-limonene.
- Fatty acid methyl esters (FAME).
- Lactate esters.
- Others.

Bio-based alcohol, glycol and diols are further bifurcated into:

- Bioethanol.
- Biobutanol.
- Bio-PG.
- Bio-BDO.
- Glycerol and derivatives.
- Others.

Based on application, the market is segmented into:

- Paints and coatings.
- Cosmetics.
- Printing inks.

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- Cleaning products.
- Adhesives and sealants.
- Pharmaceuticals.
- Others.

Based on region, the market is segmented into:

- North America.
- Europe.
- Asia-Pacific.
- Rest of the World (RoW).

Report Includes

- 72 data tables and 25 additional tables
- An analysis of trends, technologies and opportunities in the global market for green solvents
- Analyses of the industry structure, with market revenue data from 2023, estimates for 2024, forecasts for 2028, and projected CAGRs through 2029
- Estimates of the market size and growth forecasts both in value and volumetric terms, and a corresponding market share analysis by material type, application, and region
- Facts and figures pertaining to the market dynamics, technology advances, regulatory landscape, and the impact of macroeconomic variables
- Overview of sustainability trends and ESG developments, with emphasis on consumer attitudes, ESG score analysis, and the ESG practices of leading companies
- Analysis of the competitive intelligence, including company shares, strategic alliances, M&A activity and venture fundings outlook
- Company profiles of market leaders, including ADM, Braskem, Cargill Inc., Corbion, and BASF SE

Executive Summary

Summary:

Green solvents, also known as environmentally friendly or sustainable solvents, are typically produced through crop processing. Various types of green solvents include water, supercritical water, ionic liquids and fluids. These alternatives are more environmentally friendly, non-toxic and safer compared with conventional volatile organic compounds (VOCs).

In industrial applications, eco-friendly green solvents help minimize the environmental footprint of the application. They are formulated with two primary goals: reducing toxicity and conserving energy resources. The green and bio-based solvents market is expected to grow significantly in the coming years, driven by strict regulations on VOC emissions and other hazardous air pollutants and increasing adoption in the Asia-Pacific region.

The shift from petrochemical and fuel products to renewable resources, along with growing government support for research into green and bio-based solvents, presents significant opportunities for market growth. The demand for eco-friendly paints and coatings has risen due to favorable regulations from entities like the European Commission (EC) and the Eco-product Certification Scheme (ECS). These solvents are crucial in dispersing or dissolving compounds used in paint production. These regulations are designed to promote the use of sustainable materials in paint production. As these regulations become more prevalent, they catalyze the adoption of green solvents, essential for dispersing or dissolving compounds in paint. This regulatory push is one of the major forces propelling the growth of the green solvents market.

The packaging industry, which uses green solvent-based sealants and adhesives for bonding applications, has grown rapidly due to increased demand for consumer goods. These factors are expected to drive market expansion during the forecast period.

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Among the various green solvents, lactate esters are expected to grow at a significant rate. This prominence is due to their widespread use in pharmaceuticals, industrial applications and personal care products. Lactate esters offer several advantages, making them attractive alternatives to traditional petroleum-based solvents. They are easily recyclable, non-corrosive, 100% biodegradable and do not contribute to ozone depletion. These properties, combined with the potential for cost reductions in their production, make lactate esters a compelling choice for a variety of applications, including paints and coatings.

ADM, Braskem, Cargill, Corbion, BASF SE, Dow, Solvay and LyondellBasell are some major green solvent producers. These companies engage in R&D to produce eco-friendly and sustainable products. They also focus on expanding their product portfolio and strengthening the supply chain network to capture market share.

Four geographical regions have been identified for the green solvents market: North America, Asia-Pacific, Europe and the Rest of the World (the Middle East and Africa and Latin America). In 2023, North America dominated the global market for green solvents. A few of the major factors propelling the regional market are the presence of several green solvents manufacturing companies in the region, technological advances and stringent regulation on the use of petroleum-based products.

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Abbreviations

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ADM

ASTROBIO

BASF SE

BIO BRANDS LLC.

BRASKEM

CARGILL INC.

CORBION

DOW

LYONDELLBASELL INDUSTRIES HOLDINGS B.V.

SOLVAY

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