

Market Study: Biobased Solvents



World Report (2nd Edition)

This brochure provides further information on the study: “Biobased Solvents – World (2nd Edition)”

Executive Summary

Bio and beauty go well together: Cosmetics are increasingly made using natural materials. Beauty and care products are one of the most important applications for bio-based solvents. The cosmetics, cleaning agents as well as the paints and coatings markets alone currently account for almost two thirds of sales of “green” solvents, which are at least partially produced from renewable raw materials. The latest bio-based solvents market report by Ceresana predicts that the global market for bio-based solvents will continue to grow and reach around USD 9.3 billion by 2034. The company’s market researchers expect average annual growth of 4.2% worldwide, and even more than 5.0% in Asia and Africa.

Natural Alcohols Instead of Petrochemicals

Industrial solvents from coal, crude oil, or natural gas are highly effective, but some of them are unfortunately also highly toxic. Volatile organic compounds in particular are considered a danger to health and the environment. In contrast, sustainable solvents based on biomass are often still more expensive, but ideally they are harmless and even biodegradable. Alcohols are by far the most commonly used type of green solvent. For example, ethylene glycol, a bivalent alcohol or diol, can be obtained from fructose or cellulose. Glycerol is a triol that can be produced from used cooking oil or other natural fats, but is also produced in large quantities in the manufacture of biodiesel (fatty acid methyl ester).

Bio-Solvents for the Bio-Economy

One advantage of bio-based solvents is the possibility of utilizing biomass residues that were previously hardly used. For example, ethyl acetate, one of the most important solvents for plastics and adhesives, can be fermented from whey or molasses, i.e. from

waste products from dairy processing or the sugar industry. Furthermore, the paint industry can use D-limonene, which can be obtained from waste peel from orange juice production.

Current Global Bio-Based Solvents Market Report:

Chapter 1 of the new study by Ceresana provides a comprehensive analysis of the global market for biobased solvents – including growth forecasts up to 2034: The market size and development of demand (in tonnes) and revenues (in USD and EUR) is explained for 7 regions. Demand for and sales of organic solvents are also broken down for 7 individual application areas. In addition, the revenues generated with the following product types are analyzed: ethanol, butanols, diols & triols, D-limonene, fatty acid methyl esters (FAME), ethyl acetate, and other solvents.

In Chapter 2, the national markets of the 16 countries with the largest solvent sales are examined individually. The demand for and revenues generated with biobased solvents are shown in each case. In addition, demand and sales are broken down for these applications: paints and coatings, personal care & cosmetics, printing inks, cleaners, pharmaceuticals, adhesives, and other applications. In addition to market data and forecasts, the new market report by Ceresana also contains background information on the general economic situation in the individual countries.

Chapter 3 provides useful company profiles of the world’s top 38 biobased solvent manufacturers, including ADM, Braskem, Cargill, Clariant, Corbion, Dow, KLK OLEO, and Merck.

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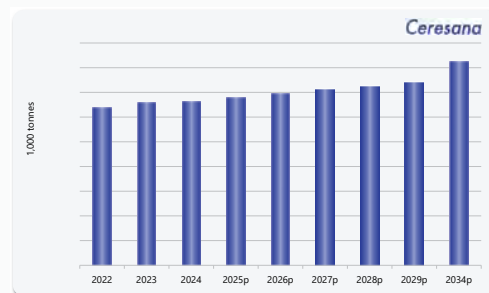
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2.1.3 Italy

In 2024, the demand for biobased solvents in Italy amounted to approx. X tonnes. We expect an average growth rate of X% p.a. for the next 10 years. The market volume will therefore amount to approx. X tonnes in 2034.

Revenues generated with biobased solvents in Italy amounted to approx. EUR X million in 2024. We forecast a market value of EUR X million for 2034.



Graph: Demand in Italy from 2022 to 2034

Revenues	2022	2023	2024	2025p	2026p	2027p	2028p	2029p	2034p	2024-2034
Million USD	X	X	X	X	X	X	X	X	X	X% p.a.
Million EUR	X	X	X	X	X	X	X	X	X	X% p.a.

Table: Revenues generated in Italy from 2022 to 2034, in million USD and million EUR

Million EUR	2022	2023	2024	2025p	2026p	2027p	2028p	2029p	2034p	2024-2034
Paints & Coatings	X	X	X	X	X	X	X	X	X	X% p.a.
Personal Care & Cosmetics	X	X	X	X	X	X	X	X	X	X% p.a.
Printing Inks	X	X	X	X	X	X	X	X	X	X% p.a.
Cleaners	X	X	X	X	X	X	X	X	X	X% p.a.
Pharmaceuticals	X	X	X	X	X	X	X	X	X	X% p.a.
Adhesives	X	X	X	X	X	X	X	X	X	X% p.a.
Others	X	X	X	X	X	X	X	X	X	X% p.a.
Total	X	X	X	X	X	X	X	X	X	X% p.a.

Table: Revenues generated in Italy from 2022 to 2034 – split by application

In 1,000 tonnes	2022	2023	2024	2025p	2026p	2027p	2028p	2029p	2034p	2024-2034
Paints & Coatings	X	X	X	X	X	X	X	X	X	X% p.a.
Personal Care & Cosmetics	X	X	X	X	X	X	X	X	X	X% p.a.
Printing Inks	X	X	X	X	X	X	X	X	X	X% p.a.
Cleaners	X	X	X	X	X	X	X	X	X	X% p.a.
Pharmaceuticals	X	X	X	X	X	X	X	X	X	X% p.a.
Adhesives	X	X	X	X	X	X	X	X	X	X% p.a.
Others	X	X	X	X	X	X	X	X	X	X% p.a.
Total	X	X	X	X	X	X	X	X	X	X% p.a.

Table: Demand in Italy from 2022 to 2034 – split by application

In 2020, the year of COVID-19, Italy's GDP slumped sharply by 8.9%. In contrast, the recovery of 8.9% in 2021 and 4.7% in 2022 was above the European average. Italian GDP growth has stagnated at 0.7% since 2023; growth is also expected to remain at this level in the coming years. Italy has the second-highest debt ratio in the EU after Greece and is one of the most indebted countries in the world (almost EUR 3 trillion in

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16 Countries, 38 Producers, 250 Pages, 54 Graphs, 120 Tables, 07/2025

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2024, around 135.3% of GDP). By contrast, the net private wealth of Italian households is estimated at a solid EUR 5.3 trillion, mainly due to a high home ownership rate (on average around EUR 30,000 more per household than in Germany). The tourism industry is growing again after COVID-19. However, the unemployment rate remains high by European standards and was over 7% in 2024, with youth unemployment at over 20%. The pronounced north-south divide also remains a persistent problem: Per capita economic output in northern Italy is almost twice as high as in the Mezzogiorno, i.e. the six southernmost mainland regions plus Sicily and Sardinia.

The right-wing populist Meloni government in office since October 2022 has changed the name of the ministry of economics from “Ministry of Economic Development” to “Ministry of Enterprises and Made in Italy” (MIMIT) and declared that it is pursuing a “patriotic approach”: Domestic production and jobs are to be promoted, capital from tax havens is to be repatriated to Italy, and investment from abroad is to be attracted. Business development centers (“Case del Made in Italy”) have been set up throughout the country. Following several referendums from 1987 to 2011, Italy gradually phased out nuclear energy – but the Italian government announced in 2024 that it wanted to build new small nuclear reactors.

Italy is to receive around EUR 68.9 billion in grants and EUR 122.6 billion in loans from EU recovery and resilience funds by 2026, including EUR 24 billion for renewable energy, hydrogen, and “sustainable mobility”. In 2025 alone, public spending is set to increase by 2.3% in real terms thanks to EU funding for sustainability and digitalization. By 2033, around EUR 230 billion is to be invested in renewable energies in Italy, EUR 21 billion in the expansion of the electricity grid, and EUR 26 billion in natural gas and hydrogen pipelines. Economic impetus is also expected from the “Holy Year 2025” in Rome and the 2026 Winter Olympics in Cortina and Milan.

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2 Market Data: Country Profiles

(For each country: Revenues and demand split by application)

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3.1 Western Europe

Belgium (3 Producer)
France (1)
Germany (5)
Italy (2)
Norway (1)
Switzerland (1)
The Netherlands (2)
United Kingdom (1)

3.2 Eastern Europe

Hungary (1)

3.3 North America

USA (11)

3.4 South America

Brazil (1)

3.5 Asia-Pacific

China (5)
India (1)
Malaysia (1)
Thailand (1)

3.6 Middle East

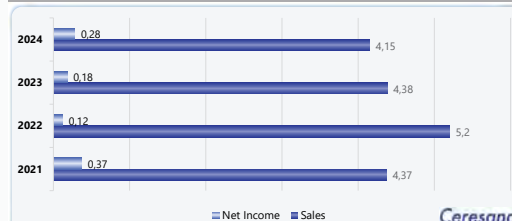
Oman (1)

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Web: www.clariant.com

Financial Key Data (in Billion CHF)



General Information about the Company

Divisions, Product Range

The company operates in the following three business divisions:

- Care Chemicals
- Catalysts
- Adsorbents & Additives

Production Sites

The company and its subsidiaries operate 68 production sites worldwide.

Profile Summary

General information:

Clariant International Ltd. was founded in 1995 as a spin-off of the chemical company Sandoz which was established in 1886 in Basel. As a company for specialty chemicals, Clariant offers numerous consumer solutions for many industries. In 2024, the company employed 10,465 people.

Financial information:

Clariant is listed on the SIX Swiss Exchange.

In 2024, total assets amounted to CHF 6.26 billion. Additionally, Clariant operates 11 research and development centers and invested about CHF 126 million into R&D.

Split by business segment, 54% of the company's revenues in 2024 were generated with Care Chemicals, 24.7% with Adsorbents & Additives, and 21.3% with Catalysts.

Split by region, 40.8% of the revenues in 2024 were generated in EMEA, 29.4% in Asia-Pacific, 17% in North America, and 12.8% in Latin America.

Current news:

In 2023, Clariant inaugurated a new production site for halogen-free flame retardants and a new catalyst plant in China. Moreover, the group divested its North American Land Oil as well as its Quats business and closed its bioethanol plant in Romania.

In 2024, the group acquired Canada-based Lucas Meyer Cosmetics.

ISO certifications:

Clariant is globally certified according to ISO 9001, ISO 14001, and ISO 45001. Furthermore, some sites are certified according to ISO 50001.

Specific Information about Biobased Solvents

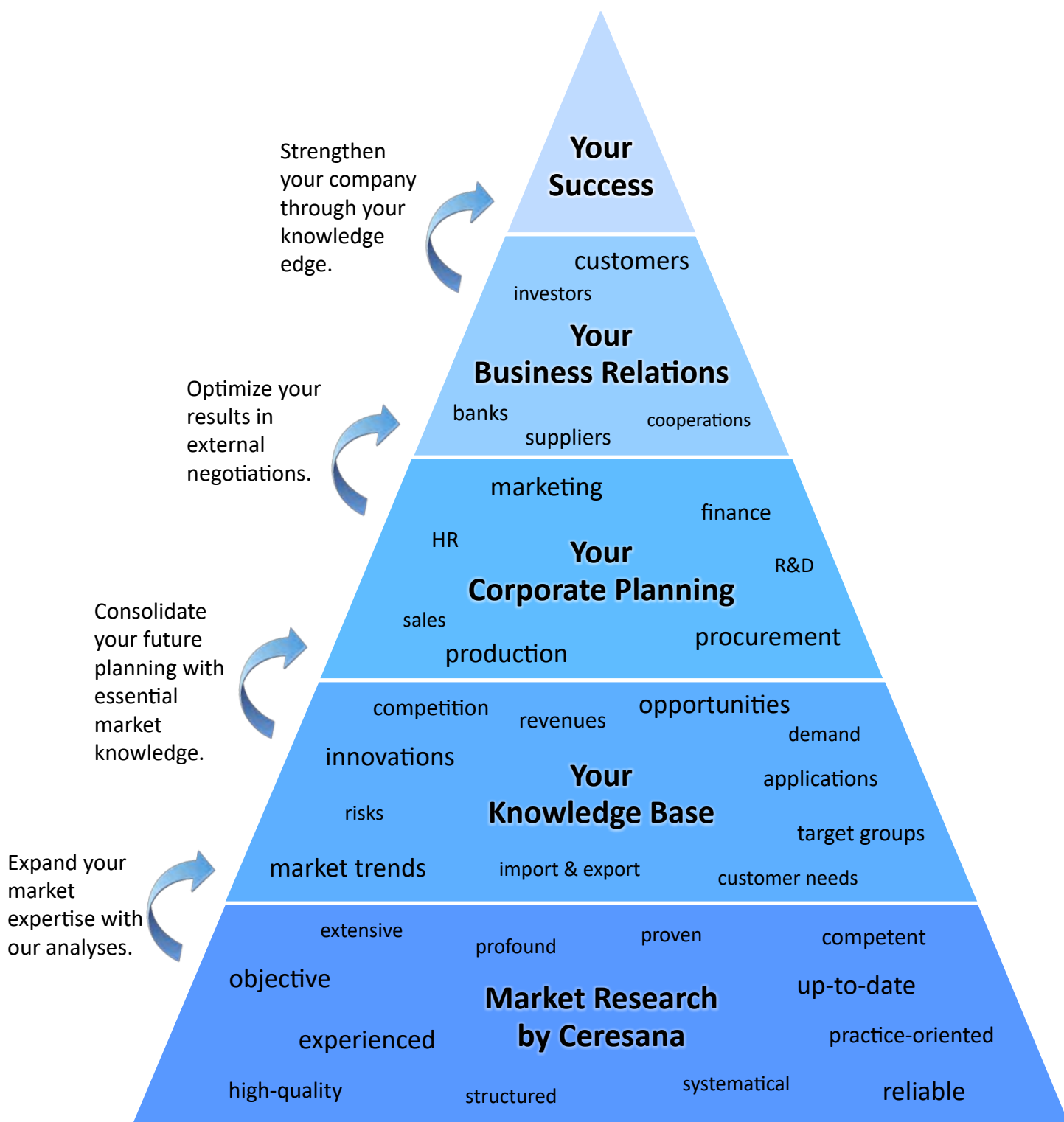
Clariant produces Polyglykol 10000 FL Terra and Polyglykol 1500 FL Terra made of biobased or renewable raw materials. The products were designed for applications in paints.

*Note: The profiles are assigned to the country in which the company or holding is headquartered. Profiles also include JVs and subsidiaries.

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**Please do not hesitate to contact
us if you have any questions.**

Reliable Data and Facts for Your Knowledge Advantage:

- Revenues, demand, production, import, and export until 2034
- Macroeconomic and sector-specific explanations per country
- Segmentation into applications, technologies, and products
- 7 world regions and up to 40 countries
- Profiles from manufacturers with capacities

Click on Any Topic to Receive Further Details on Our Current Studies:

Bio-Economy	<u>Biobased Adhesives – Europe / – World</u>	<u>Adhesives – Europe / – World</u>	Industry
	<u>Biobased Insulation Material – World</u>	<u>Insulation Material – Europe / – World</u>	
	<u>Biobased Paints & Coatings – Eur. / – World</u>	<u>Paints & Coatings – Europe / – World</u>	
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	<u>Bioplastic Packaging – World</u>	<u>Plastic Pipes – Europe / – World</u>	
	<u>Bioplastic Films – World</u>	<u>Plastic Windows – World</u>	
	<u>Bioplastics – World</u>	<u>Printing Inks – Europe / – World</u>	
Chemicals	<u>Polylactic Acid – World</u>	<u>Windows & Doors – Europe</u>	Plastics
	<u>Carbon Black – World</u>	<u>Composites (CFRP & GFRP) – World</u>	
	<u>Fillers – Europe / – World</u>	<u>Engineering Plastics – World</u>	
	<u>Flame Retardants – World</u>	<u>Expandable Polystyrene – World</u>	
	<u>Pigments – World</u>	<u>Masterbatches – World</u>	
	<u>Plastic Additives – World</u>	<u>Plastics – Europe / – World</u>	
	<u>Plasticizers – World</u>	<u>Polyethylene (LDPE) – World</u>	
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Packaging	<u>Stabilizers – World</u>	<u>Polypropylene – World</u>	Mobility
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	<u>Titanium Dioxide – World</u>	<u>Silicones – World</u>	
	<u>Bags, Sacks & Pouches – Europe / – World</u>	<u>Synthetic Rubber – World</u>	
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