Market Study: Biobased Adhesives





This brochure provides further information on the study: "Biobased Adhesives – World (2nd Edition)"

Executive Summary

Sugar, starch, or soy: more than 15% of all adhesives are already made from renewable raw materials. In the spirit of the bio-economy and circular economy, the proportion of plant- and animal-based raw materials used in adhesive products is also constantly increasing. The latest Ceresana report on the global market for bio-based adhesives forecasts that sales of "green" glues will increase to around USD 4.5 billion by 2034. In order to reduce the ecological footprint and dependence on crude oil and natural gas, bio-based components are increasingly being added to conventional adhesives made from petrochemical plastics. Growth in demand for high-performance and eco-friendly adhesives is particularly expected in the construction sector.

An Innovative Field: Bio-Based Adhesives

Adhesives made from biogenic raw materials are no longer limited to special applications. With the help of additives and copolymers, bio glues are also increasingly meeting demanding standards for industrial high-performance products. Dynamic research and development is driven by the search for non-toxic, solvent-free, low-emission, and recyclable adhesives. Ideally, bio-based products are even biodegradable at the end of their life cycle. Another advantage is the possible recycling of previously unused waste and inexpensive by-products.

Adhesives for Packaging and Construction

Today, more than 13 million tonnes of adhesives are consumed globally each year. Most of these are still adhesives made from fossil raw materials. However, the demand for biobased adhesives is increasing significantly: In the coming years, Ceresana expects annual growth of over 4.8% in Asia, Africa, and the Middle East and just over 3% in Western

Europe and North America. The largest individual markets are the application areas of paper and packaging, the construction industry, and the wood processing industry. Paper bags and other packaging alone currently account for almost a third of global sales of bio-based adhesives. In addition to market data and forecasts, the bio-based adhesives market report by Ceresana also contains background information on the general economic situation and the situation in the construction industry in the individual countries.

The Current Market Report by Ceresana:

Chapter 1 of the new market study provides a comprehensive presentation and analysis of the global market for biobased adhesives with forecasts up to 2034: For 7 world regions, the development of demand (tonnes) and revenue (dollars and euros) is shown. In addition, revenues and demand are broken down by the application areas paper/packaging, construction industry, wood processing, and other applications.

In **Chapter 2**, the **17 countries** with the largest national markets for bioadhesives are examined individually. The demand for and revenues generated with bio-based adhesives are shown in each case. In addition, **demand** and **revenues** are further broken down by the following adhesive **application areas**: paper/packaging, construction industry, wood processing, and others.

Chapter 3 provides **34 company profiles** of the largest bio-based adhesive **manufacturers**, such as Cargill, Stora Enso, Fuller, Solenis, Soudal, Kerakoll, Avebe, Artivion, and artience.

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Million USD	2022	2023	2024	2025p	2026p	2027p	2028p	2029p	2034p	2024
Paper/Packaging	х	х	Х	х	х	х	х	х	х	Х
Construction Industry	х	х	Х	х	х	х	х	х	х	х
Wood Processing	х	х	Х	x	х	х	x	х	x	Х
Others	х	х	х	х	Х	х	х	Х	х	Х
Total	х	х	х	х	х	х	х	х	х	х

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

In 1,000 tonnes	2022	2023	2024	2025p	2026p	2027p	2028p	2029p	2034p	2024-
Paper/Packaging	х	х	Х	х	х	х	х	х	х	Х
Construction Industry	х	х	х	х	х	х	х	х	х	х
Wood Processing	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Others	х	х	х	х	Х	х	х	х	х	х
Total	х	х	х	х	х	х	х	х	х	x

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

About three quarters of GDP is generated by services, and tourism in particular is booming. However, mass tourism in Barcelona and along the coasts is increasingly encountering resistance from the local population. The industrial sector accounts for around 22% of GDP, with the automotive sector alone accounting for around 8%. After real GDP growth of 2.7% in 2023, the IMF is forecasting an increase of 2.9% in 2024 and 2.1% in 2025 – well above the EU average. Export-oriented companies are mainly concentrated in Madrid and Catalonia, and to a lesser extent in the Basque Country. The rest of the country is characterized by less productive micro-enterprises (96% of companies have a maximum of nine employees). The unemployment rate (more than 11% in 2024) and youth unemployment in particular is the highest in Europe, ahead of Greece and Finland. The minimum wage was increased by 4.4% to EUR 39.47 per day at the beginning of 2025. Following the end of the COVID-19 pandemic, foreign trade

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Market Study: "Biobased Adhesives – World (2nd Edition)" 17 Countries, 34 Producers, 240 Pages, 52 Graphs, 102 Tables, 06/2025

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is developing dynamically, Spain is one of the 20 largest exporting countries in the world. As the largest EU grant recipient, Spain, which is heavily indebted, can expect to receive around EUR 164 billion in EU funding by 2027. After flooding in the Valencia region in October 2024, the government organized more than EUR 14.4 billion in aid for reconstruction, e.g. in the form of loans. Spanish society is highly polarized; political conditions have been unstable, especially since the bursting of the real estate bubble and the financial crisis of 2008. A left-wing minority government under Pedro Sánchez has relied on separatists from Catalonia and the Basque Country since November 2023; it is based on a fragile coalition of six parties and two individual delegates.

With around 437,551 companies and almost 1.38 million employees, the entire construction industry generated around 12% of Spain's GDP in 2023: a production value of EUR 193.36 billion, an increase of 7.3% compared to 2022. The leading Spanish construction and infrastructure companies, which had grown domestically during the construction boom until the crash of 2007, now generate the largest proportion of their turnover abroad. Grupo ACS generated sales of EUR 41.63 billion in 2024 (not only with construction activities but also with e.g. toll roads), for example with the companies Dragados and Hochtief in Europe, Turner and Flatiron in North America, and CIMIC in Asia. ACS is currently ranked 10th in ENR's "Top 250 Global Contractors". The largest Spanish construction companies by turnover also include Acciona S.A. (infrastructure turnover of EUR 8.15 billion), OHLA Group (construction turnover of EUR 3.3 billion), Grupo FCC (construction turnover of EUR 2.9 billion), and Grupo Sanjosé (construction turnover of EUR 1.4 billion). Ferrovial S.E., founded in 1952 as a Spanish railroad construction company, relocated its headquarters from Madrid to Amsterdam in 2023; Ferrovial's construction division alone achieved a turnover of EUR 7.2 billion in 2024.

In Spain itself, the construction industry was hit harder by the consequences of the COVID-19 pandemic than in other countries. It recovered more slowly than the Spanish economy as a whole: Total construction output in 2022 was almost 25% lower than in 2019. According to Eurostat figures, labor productivity in the Spanish construction

sector has fallen by 18% since 2015 – compared to an average of just 5% in the eurozone. To overcome the consequences of COVID-19, Spain can expect EU support totaling EUR 163.8 billion until 2026 for its recovery and resilience plan. Around 10% of this is to be invested in the renovation and refurbishment of buildings.

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Belgium (1 Producer)

Finland (1)

France (1)

Germany (1)

Italy (4)

Spain (1)

Switzerland (1)

The Netherlands (2)

United Kingdom (2)

3.2 North America

Canada (1) USA (10)

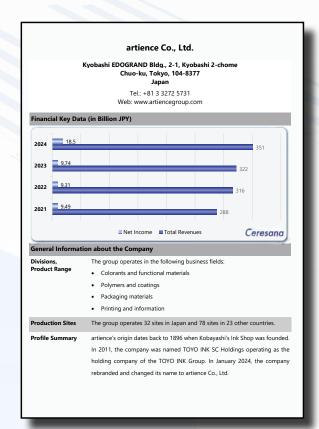
3.3 Asia-Pacific

India (4)

Japan (1)

Taiwan (3)

Thailand (1)



The artience group is active worldwide and has 62 consolidated subsidiaries in and outside Japan. The main activities of the group comprise the production and sale of printing inks, pigments, colors, and related products. In 2024, the group employed 7,897 people. In the same year, R&D expenditures reached JPY 10.1 billion, and total assets amounted to JPY 472.8 billion.

Divided by business segment, 24.65% of the 2024 net sales were generated with colorants & functional materials, 25.3% with polymers & coatings, 26.2% with packaging materials, and 23.85% with printing and information.

Divided by region, 44.6% of the net sales in 2024 were generated in Japan, 15.2% in China, and 40.2% in other countries.

In 2023, the group acquired Thai Eurocoat Ltd. and expanded its production site in Kawagoe, Japan.

In 2024, artience announced the planned expansion of a plant in Gujarat, India. The same year, the group withdrew from the agri-business.

In 2025, artience established a joint venture with Shenzhen Yongda Photosensitive Technology Co., Ltd.

Most of the group's manufacturing sites are certified according to ISO 9001 and ISO 14001.

Specific Information about Biobased Adhesive

artience offers biomass pressure sensitive adhesives. Biomass pressure sensitive adhesives are pressure sensitive adhesives manufactured using plant-derived resources as part of its raw materials. The proportion of biomass raw materials in the dry weight of a product is expressed as biomass degree. The product EXK 20-136 has a biomass degree of 75% and the product EXK 20-140 a biomass degree of 80%.

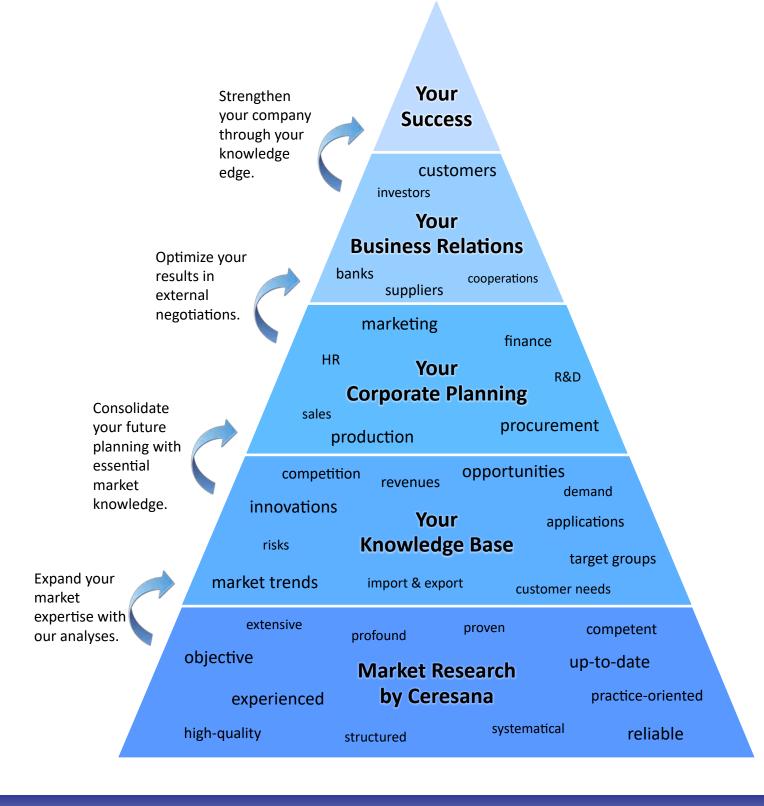
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^{*}Note: The profiles are assigned to the country in which the company or holding is headquartered. Profiles also include JVs and subsidiaries.

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- Segmentation into applications, technologies, and products
- 7 world regions and up to 40 countries
- Profiles from manufacturers with capacities

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<u>Bioplastics – World</u> <u>Printing Inks – Europe</u> / <u>– World</u>

<u>Polylactic Acid – World</u> <u>Windows & Doors – Europe</u>

<u>Carbon Black – World</u> <u>Composites (CFRP & GFRP) – World</u>

<u>Fillers – Europe / – World</u> <u>Engineering Plastics – World</u>

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<u>Bags, Sacks & Pouches – Europe</u> / <u>– World</u>

Corrugated Board & Solid Board – Europe

Thermoplastic Elastomers – World

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<u>Labels – Europe</u> <u>Hybrid & Electric Cars – Europe</u>

<u>Plastic Caps & Closures – Europe / – World</u>

Plastic Films - Europe / - World



Plastics

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