Market Study: Biobased Adhesives





This brochure provides further information on the study "Biobased Adhesives - Europe (1st edition)"

The Market Study in Brief

Adhesives make many environmentally friendly products possible: lightweight car bodies and batteries for electromobility, insulation glazing for facades and insulating panels as well as corrugated cardboard packaging or simple paper bags. Increasingly, however, not only the end products but also the adhesives themselves are to be "organic" - in fact, more than 13 million tonnes are already produced around the world each year. So far, conventional petrochemical plastic products have accounted for the largest share. However, Ceresana's report predicts that adhesives made, at least in part, from renewable raw materials will grow significantly and global revenues will reach around USD 3.8 billion by 2032.

Better bonding with biobased adhesives

Even during the age of petroleum, natural adhesives were always superior to synthetic polymers in individual specialty applications. Such cases include starch adhesives for bottle labels, methyl cellulose in wallpaper paste, or collagen for musical instruments. Over the next 10 years, demand for biobased adhesives is expected to increase significantly: Ceresana expects annual growth of more than 4% in Asia, Africa and the Middle East, and just over 3% in Europe and North America.

Packaging industry as main customer

Biobased adhesives can often be obtained from previously unused waste and inexpensive by-products, for example from platform chemicals produced during the manufacture of biofuels from biomass. Meanwhile, plant and animal base materials can be modified with additives or copolymers to make them

increasingly competitive in industrial adhesive applications. So far the most important applications have been comparatively unspectacular: The largest individual markets are the paper and packaging, construction and wood processing sectors. In 2022, the paper and packaging application area alone accounted for more than one third of the revenues generated worldwide with biobased adhesives.

The new market study "Biobased Adhesives":

Chapter 1 of the new study provides a comprehensive presentation and analysis of the global market for biobased adhesives - including forecasts up to 2032: The development of both demand (tonnes) and revenues (USD and EUR) is outlined for each of the 7 world regions.

In Chapter 2, the 16 countries with the largest sales of biobased adhesives are considered individually. Demand and revenues are shown in each case. In addition, revenues are broken down for the various applications:

- Paper / Packaging
- Construction industry
- Wood processing
- Other applications

Chapter 3 provides useful company profiles of the most important manufacturers, clearly arranged by contact details, revenues, profit, product range, production sites and brief profile. Detailed profiles are provided by 36 manufacturers, e.g. Beardow Adams Ltd, Bostik S.A., Kiilto Oy, Henkel AG & Co. KGaA, Ingredion Incorporated, Intercol BV, Jowat SE, and Toyo Ink SC Holdings Co., Ltd.



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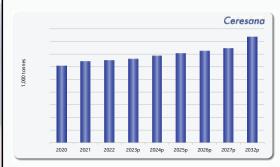
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In 2022, demand for biobased adhesives in Italy amounted to X tonnes. For the coming years, we forecast an average growth rate of X% per year. The market volume is expected to reach a volume of X tonnes by 2032.

Revenues generated with biobased adhesives in Italy in 2022 amounted to approximately EUR X million. For the year of 2032, we forecast sales values of EUR X million.



Graph: Demand in Italy from 2020 to 2032

Revenues	2020	2021	2022	2023p	2024p	2025p	2026р	2027p	2032p	2022- 2032
million USD	х	Х	х	х	Х	х	х	Х	х	X% p.a.
million EUR	х	Х	х	х	х	х	х	х	х	X% p.a.
Table: Revenues g	enerate	d in Ita	ly fror	n 2020	to 203	2 in mi	llion US	D and	million	EUR

million USD	2020	2021	2022	2023p	2024p	2025p	2026p	2027p	2032p	2022
Paper/Packaging	х	х	х	х	х	х	х	х	х	X% p.a.
Construction	х	х	х	х	х	×	×	х	×	X% p.a.
Wood processing	х	х	х	×	×	×	×	×	×	X% p.a.
Other	х	х	х	×	×	х	×	×	х	X% p.a.
Total	х	x	х	х	х	х	x	х	х	X% p.a.
able: Revenues g	enerate	d in Ita	ly fron	n 2020	to 203	2 in mi	llion US	SD – sp	lit by	-

The "Paper / Packaging" application area accounted for the largest share of revenues generated with biobased adhesives in 2022. In the 2022 to 2032 period, the "Construction industry" is expected to experience the highest percentage increases.

Market Study "Biobased Adhesives - Europe (1st edition)" 16 Countries, 36 Producers, 160 Pages, 50 Graphs, 64 Tables; 06/2023

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Taiwan (1)

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General Information about the Company

Divisions,

The company operates in the following business fields:

- Construction
- Industrial adhesives and fireproofing
- Professional hygiene
- Consumer goods

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The company's production sites are located in:

Finland

Profile Summary

The company was founded in 1919. Kiilto Oy is a subsidiary of Kiilto Family Oy, which is the parent company of Kiilto Group and responsible for the financial and IT-administration. The family-owned company is a producer of chemical industry products for construction and industry. The business involves the development, manufacturing and marketing of adhesives and closely related products. Kiilto Group employs about 800 people in 9 countries. In 2022, the company generated net sales amounting to EUR 260 million.

The company's quality and environmental management system is certified according to ISO 9001 and ISO 14001. The safety system is certified according to the OHSAS 18001 standard.

Specific Information about Biobased Adhesives

Kiilto offers different biobased adhesives, including:

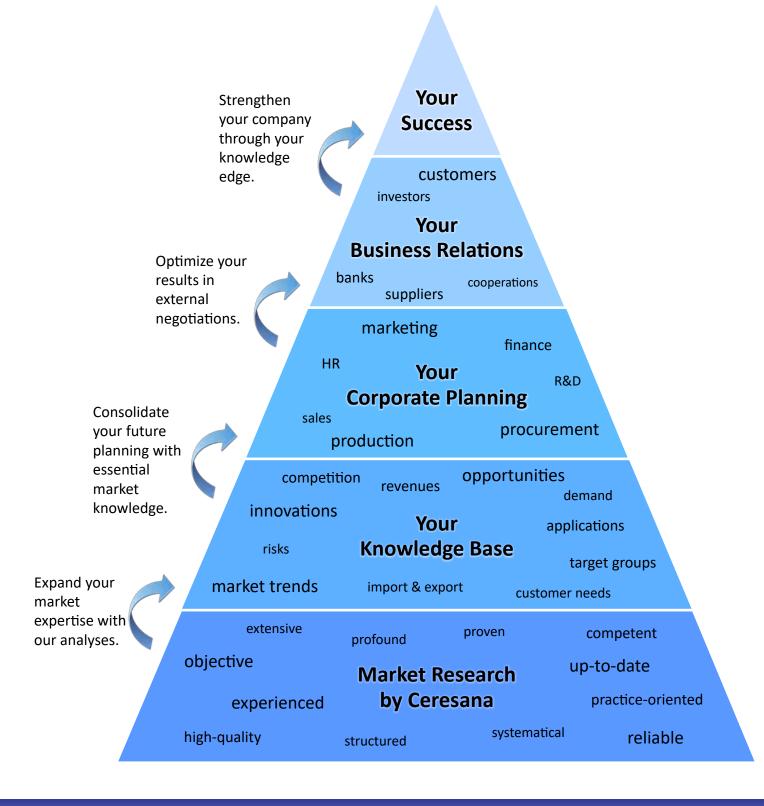
- Kiilto Biomelt: biobased hot melt adhesive with more than 70% biobased raw materials for packaging.
- Kiilto Pro Pack Eco: a range of biobased adhesives for packaging. Made from 70 up to 100% of renewable sources.
- Sitol: a starch adhesive for gluing shopping bags

^{*}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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Plastic Films - World

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Biobased Adhesives - World <u>Adhesives - Europe</u> **Biobased Insulation Material - World Adhesives - World Insulation Material - Europe Biobased Paints and Coatings - World Biobased Solvents - World Insulation Material - World Biobased Surfactants - World Paints & Coatings - Europe Bioplastic Packaging - World** Paints & Coatings - World **Bioplastic Films - World Plastic Extrusion - Europe Bioplastics - World Plastic Injection - Europe** Polylactic Acid (PLA) - World **Plastic Pipes - Europe Plastic Pipes - World Biocides - World Plastic Windows - World Carbon Black - World Printing Inks - Europe Chelating Agents - World Printing Inks - World** Fillers - Europe Windows & Doors - Europe **Fillers - World** Flame Retardants - World Composites (CFRP & GFRP) - World **Pigments - World Engineering Plastics - World Plastic Additives - World Expandable Polystyrene (EPS) - World Masterbatches - World Plasticizers - World Solvents - World Plastics - Europe Stabilizers - World Plastics - World Surfactants - World** Polyethylene (HDPE) - World Titanium Dioxide (TiO2) - World Polyethylene (LDPE) - World Polyethylene (LLDPE) - World Bags, Sacks & Pouches - Europe **Polypropylene - World Bags, Sacks & Pouches - World** Polystyrene & EPS - World **Corrugated Board & Solid Board - Europe** Polyvinyl Chloride (PVC) - World Flexible Packaging - Europe **Silicones - World Food Packaging - Europe Synthetic Rubber - World** <u>Labels - Europe</u> <u>Thermoplastic Elastomers (TPE) - World</u> **Plastic Caps & Closures - Europe Plastic Caps & Closures - World Automotive Coatings - World**

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Automotive Plastics - World
Hybrid & Electric Cars - Europe



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