Market Study: Biobased Insulation Materials

Europe Report (2nd Edition)

Ceresana
Market Research Since 2002

This brochure provides further information on the study "Biobased Insulation Materials – Europe (2nd Edition)"

Executive Summary

Green competition for plastic foam and mineral wool is growing: Wood fiber insulation, insulation made from sheep's wool, and other insulation materials made from renewable raw materials currently account for a total market share of 6.5% in Europe. In some countries, this figure even exceeds 12%. Ceresana has analyzed the European market for biobased insulation materials, which are used in the construction industry primarily for thermal insulation, but also as cold insulation, soundproofing, or humidity buffers. The new, second edition of the market study predicts that sales of these renewable materials will rise to more than EUR 2.33 billion by 2034.

Traditional Materials, Innovative Insulation Products

Whether as blow-in flakes, panels, mats, or pellets: Today, cellulose is by far the most widely used biobased insulation material and has a market share of almost 46% in this segment. Cellulose usually comes from the recycling of paper. The trend towards energy saving, environmentally friendly buildings and homes with a healthy indoor climate means that traditional insulation materials such as straw bales, reed, cork, flax, hemp, and other natural fibers are being given a new lease on life. The vision of a circular economy is spurring the search for biobased innovations. How about denim wool made from old jeans? Researchers are also working on aerogel made from lignin, a by-product of paper production, which is bonded with biodegradable plastics such as polylactic acid (PLA). Space-saving, wafer-thin panels or insulating plaster made of aerogel could optimize the thermal insulation of windows and doors.

Exciting Times for the Construction Industry

The construction industry is currently experiencing a challenging phase in many countries. In Italy and France, major subsidy programs for the energy-efficient refurbishment of buildings are coming to an end. On the other hand, billions in public spending on infrastructure and climate protection promise new contracts in Germany. In the European Union, better thermal insulation is one of the priorities of the recovery and resilience plans for the "green transition" by 2026. Ceresana forecasts demand for biobased insulation materials in residential construction to rise at an average rate of 3.7% per year, and slightly less in non-residential construction. In the renovation sector, on the other hand, growth rates could reach up to 4% per year.

Market Study "Biobased Insulation Materials – Europe (2nd Edition)":

Chapter 1 provides a comprehensive analysis of the European market – including forecasts up to 2033. The development of **demand** and **revenues** is explained. The demand is also broken down for the individual application areas and the following product types: Cellulose, wood, and other insulation materials.

In **Chapter 2**, the market for insulation materials is analyzed individually for **14 countries**. Demand and revenues are shown in each case. In addition, the demand is broken down into the segments "new construction" and "renovation" as well as "residential construction" and "commercial construction".

Chapter 3 provides 41 company profiles of the largest manufacturers, such as Kingspan, Steico, Gebr. Knauf, DAW, GUTEX, Saint-Gobain, Soprema, and Isocell.

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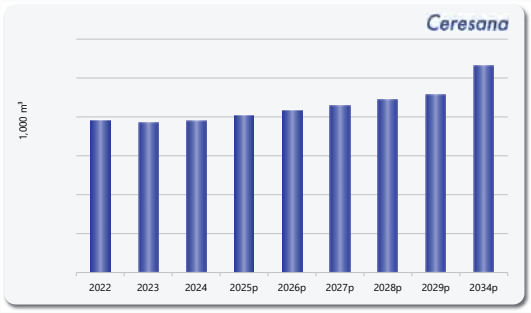
2.4 France

The French demand for biobased insulation materials amounted to X million m^3 in 2024. This demand volume is likely to increase to approx. X million m^3 by the end of our forecasting horizon. The revenues generated with biobased insulation materials in 2024 amounted to about EUR X million. We expect growth of X% p.a. in this regard in the upcoming ten years.



Graph: Demand in France 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 France from 2022 to 2034, in million USD and million EUR

1,000 m³	2022	2023	2024	2025p	2026p	2027p	2028p	2029p	2034p	2024-2034
New construction	X	X	X	X	X	X	X	X	X	X% p.a.
Renovation	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 France from 2022 to 2034 – split by "new construction" and "renovation"

1,000 m³	2022	2023	2024	2025p	2026p	2027p	2028p	2029p	2034p	2024-2034
Wood	X	X	X	X	X	X	X	X	X	X% p.a.
Cellulose	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 France from 2022 to 2034 – split by material

1,000 m³	2022	2023	2024	2025p	2026p	2027p	2028p	2029p	2034p	2024-2034
Residential	X	X	X	X	X	X	X	X	X	X% p.a.
Non-residential	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 France from 2022 to 2034 – split by "residential construction" and "commercial construction"

"Insulation materials made of cellulose" constituted the largest sub-market in 2024. The demand for "insulation materials made of other biobased materials" is expected to develop most dynamically between 2024 and 2034.

The French construction industry employs around 1.75 million people, who generated a pre-tax turnover of EUR 215 billion in 2023 (of which EUR 30 billion came from energy-related renovations alone). Of the approximately 381,000 construction compa-

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nies, over 90% have only 10 or fewer employees. However, the three leading construction groups are among the 20 largest construction companies in the world and generate a significant proportion of their turnover abroad (USD 84.2 billion in 2023), primarily with infrastructure and civil engineering:

- Vinci SA (EUR 71.6 billion turnover in 2024, of which 58% was generated abroad),
- Bouygues SA (EUR 56.8 billion, of which 62% was generated abroad),
- Eiffage SA (EUR 24.4 billion, of which around 31% was generated abroad, primarily in West Africa).

Vinci is the largest non-Chinese construction group in the world (ranked 6th in 2024) and the most important construction company in Africa, for example through its subsidiary Sogea-Satom. In 2024, Vinci acquired the construction companies Newport Construction in the USA and EMF in Canada. The international construction activities of French companies are supported by the French state with loans and other instruments, but are suffering from the weak Chinese economy and increasing competition from Chinese, Turkish, and Indian companies.

Construction output in France itself has recovered, but is still below pre-COVID-19 pandemic levels in all construction segments. A slight decrease of 0.9% was recorded in 2023 and a decline by 6.6% in 2024. The industry association FFB expects total construction activity to fall by a further 5.6% in 2025. After Spain and Italy, France is receiving the third largest amount of EU funding to overcome the COVID-19 crisis: EUR 39.4 billion for the "France Relance" economic stimulus package, which is to have a total volume of EUR 100 billion.

The French construction industry generated sales of EUR 162.5 billion in building construction in 2023, an increase of 1.7% compared to the previous year. Of this, EUR 70.7 billion was generated from new construction (EUR 39.6 billion from apartments) and EUR 91.8 billion from maintenance and renovation. Construction starts fell by 24.9% in 2023 and by a further 14.2% in 2024 – reaching a low of 253,000 units, which corresponds to the level of 1954 according to the industry association FFB. The

owner-occupied housing market in particular collapsed. At constant prices, new residential construction activity fell by 21.9% in 2024. The industry association FFB expects new residential construction to fall by 14.2% to 239,000 units in 2025. The number of housing completions in France fell from 375,700 in 2022 to 328,600 in 2023; the Euroconstruct organization expects 318,300 in 2024 and 271,600 in 2025. The number of building permits fell from 489,811 in 2022 to 372,110 in 2023; 327,300 were expected for 2024.

Around EUR 69.9 billion was invested in non-residential construction in 2023, 1.3% more than in the previous year. The hotel and leisure sector is slowly recovering. Disneyland near Paris is to be expanded at a cost of EUR 2 billion by 2026. Industrial construction increased its turnover by around 4% in nominal terms in 2023. The construction of logistics centers for online retail in particular is increasing rapidly. New battery factories are currently being built in Dunkerque and Crolles, each costing several billion euros. All other non-residential categories, however, are still below pre-COVID-19 levels, especially agricultural structures. In 2024, new construction production in non-residential construction fell by 7.4%. With the exception of public buildings, all segments recorded a sharp decline. FFB expects a further 15% decline in non-residential construction in 2025: Building space could reach a low of 18.8 million m².

The French government plans to invest around EUR 500 million in social housing and student residences by 2026. There are various subsidy programs, grants, and zero-interest loans for measures to improve the energy efficiency of buildings. As part of the "France Relance" economic stimulus package, EUR 4 billion is being used to promote the energy-efficient refurbishment of public buildings, SMEs, and social housing. The "Loi climat et résilience" will gradually ban the rental of poorly insulated apartments (energy efficiency classes F and G) by 2028 – this could affect more than 5.2 million apartments. In the case of certain older buildings, rent increases must be linked to energy-related renovations. Energy-saving regulations are also gradually being tightened for commercial properties.

"France Relance" will invest EUR 260 million over three years in the protection of historical monuments, including EUR 80 million in the renovation of cathedrals. However,

2 Market Data: Country Profiles

(For each country: Revenues, demand broken down by materials, and demand broken down by „new construction" and „renovation" as well as „residential" and „commercial construction".)

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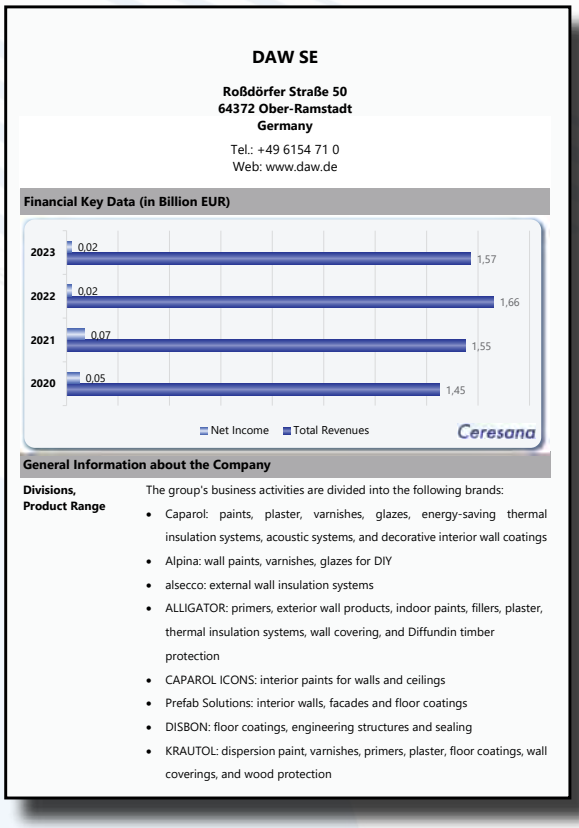
3 Company Profiles*



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Financial Key Data (in Billion EUR)

General Information about the Company

Divisions, Product Range	The group's business activities are divided into the following brands: • Caparol: paints, plaster, varnishes, glazes, energy-saving thermal insulation systems, acoustic systems, and decorative interior wall coatings • Alpina: wall paints, varnishes, glazes for DIY • alsecco: external wall insulation systems • ALLIGATOR: primers, exterior wall products, indoor paints, fillers, plaster, thermal insulation systems, wall covering, and Diffundin timber protection • CAPAROL ICONS: interior paints for walls and ceilings • Prefab Solutions: interior walls, facades and floor coatings • DISBON: floor coatings, engineering structures and sealing • KRAUTOL: dispersion paint, varnishes, primers, plaster, floor coatings, wall coverings, and wood protection • CMS Group: DAW's national dealer network (13 dealers and approx. 170 locations) distributes paints, carpets, floor coverings, tools, etc. • Caparol Industrial Solutions: high-quality color concentrates in various consistencies for a variety of industrial applications
Production Sites	DAW SE operates several factories in Germany. Additionally, some of the group's subsidiaries operate their own production sites.
Profile Summary	DAW SE (Deutsche Amphibolin-Werke von Robert Murjahn Stiftung & Co KG) was founded in 1895 and is 100% family-owned. Since 2013, the company has been operating as a Societas Europeae (SE). Since its foundation, the company has been active in the architectural paints segment. The group employed around 6,000 people and total assets amounted to EUR 1.05 billion in 2023. Split by geographical region, 57.6% of revenues in 2023 were generated in Germany, 29.8% in the rest of Western Europe, 11.9% in Eastern Europe, and 0.7% in the Middle East and Asia. The company's quality, environment, safety, and energy management systems are certified according to ISO 9001, ISO 14001, ISO 45001, and ISO 50001.

Specific Information about Biobased Insulation Material

DAW SE produces biobased insulation materials through the subsidiaries Synthesa, Inthermo, and Caparol. Synthesa offers insulation panels based on hemp under the brand name "Capatect". They are used to insulate door and window reveals, facades, ceilings, and more. Additionally, Caparol offers insulation boards for facades, basement ceilings, and underground garages based on wood fiber and also known under the brand name "Capatect". Inthermo produces wood fiber-based insulation boards, such as the products known under the brand names "INTHERMO HFD-Exterior Massiv" for the insulation of exterior masonry walls and "INTHERMO HFD-Interior Clima" for the insulation of interior walls.

*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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- 7 world regions and up to 40 countries
- Profiles from manufacturers with capacities

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Biobased Insulation Material – World
Biobased Paints & Coatings – Eur. / – World
Biobased Solvents – Europe / – World
Biobased Surfactants – Europe / – World
Bioplastic Packaging – World
Bioplastic Films – World
Bioplastics – World
Polylactic Acid – World

Chemicals

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Bags, Sacks & Pouches – Europe / – World
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Flexible Packaging – Europe
Food Packaging – Europe
Labels – Europe
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Industry

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Plastics

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Engineering Plastics – World
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Polyethylene (LLDPE) – World
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Thermoplastic Elastomers – World

Mobility

Automotive Coatings – World
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Hybrid & Electric Cars – Europe