

The Global Market for Advanced Bio-based and Sustainable Materials 2025-2035

https://marketpublishers.com/r/GDC8068E456CEN.html

Date: December 2024 Pages: 2329 Price: US\$ 1,850.00 (Single User License) ID: GDC8068E456CEN

Abstracts

The global market for advanced bio-based and sustainable materials is experiencing rapid growth driven by increasing environmental concerns, regulatory pressure for sustainable solutions, and growing consumer demand for eco-friendly products. These materials are being developed to replace petroleum-based and other non-sustainable materials across multiple industries while offering improved environmental performance and circularity.

Key drivers include:

Push to reduce carbon emissions and environmental impact

Government regulations promoting sustainable materials

Corporate sustainability commitments

Consumer preference for eco-friendly products

Need for alternatives to petroleum-based materials

Advancement in production technologies

Investment in bio-based manufacturing

The market encompasses multiple material categories including bio-based chemicals, polymers, composites, and advanced materials for construction, packaging, textiles, and



electronics applications. Current market size is estimated at over \$100 billion and growing at 10-15% annually, with bio-based polymers and sustainable packaging representing the largest segments.

Significant opportunities exist in:

Drop-in replacements for petroleum-based chemicals

Novel bio-based polymers with enhanced properties

Natural fiber composites for automotive and construction

Sustainable building materials and green steel

Bio-based packaging solutions

Next-generation sustainable textiles

Electronics from renewable materials

The outlook remains highly positive as technologies mature and costs decrease. Growth is expected to accelerate as manufacturers increase adoption of sustainable materials to meet environmental goals and consumer demands. Asia Pacific represents the fastest growing market, while Europe leads in technology development and adoption.

This extensive 2200+ page report provides detailed market data and analysis of the rapidly growing advanced bio-based and sustainable materials market, covering bio-based chemicals, polymers, composites, construction materials, packaging, textiles, adhesives, and electronics applications. The report includes granular 10-year forecasts, competitive analysis of over 1,000 companies, and in-depth assessment of technologies, manufacturing processes, and end-use markets.

Key Report Features:

Comprehensive analysis of bio-based chemicals and intermediates including starch, glucose, lignin, and plant-based feedstocks

Detailed market sizing and forecasts for bio-based polymers and plastics



including PLA, PHA, bio-PE, bio-PET

Assessment of natural fiber composites and wood composites market opportunities

Analysis of sustainable construction materials including bio-concrete, green steel, and thermal materials

Deep dive into bio-based packaging applications and markets

Coverage of sustainable textiles and bio-based leather alternatives

Evaluation of bio-based adhesives, coatings and electronic materials

Company profiles of over 1,000 companies developing advanced sustainable materials. Companies profiled include ADBioplastics, AlgiKnit, Allbirds Materials, Ananas Anam, Anellotech, Avantium, Basilisk, BASF, Blue Planet, Bluepha, Bolt Threads, Borealis, Braskem, Carbios, CarbonCure, Cargill, Cathay Biotech, CJ Biomaterials, Danimer Scientific, DuPont, Ecologic Brands, Ecovative, FlexSea, Futamura, Genomatica, GRECO, Helian Polymers BV, Huitong Biomaterials, Interface, Kaneka, Kingfa Science and Technology, Lactips, Loliware, MarinaTex, Modern Meadow, Mogu, Mushroom Packaging, MycoWorks, Natural Fiber Welding, NatureWorks, Newlight Technologies, Notpla, Novamont, Novozymes, Orange Fiber, Origin Materials, Ourobio, Paptic, Plantic Technologies, PlantSea, Prometheus Materials, Roquette, RWDC Industries, Solidia Technologies, Spinnova, Succinity, Sulapac, Sulzer, TerraVerdae Bioworks, Tipa Corp, Total Corbion, TotalEnergies Corbion, Trinseo, UPM, Vitrolabs, Wear Once, Xampla, Yield10 Bioscience, Zoa BioFabrics and more....

Detailed Coverage Includes:

Raw material sourcing and feedstock analysis

Production processes and manufacturing methods

Material properties and performance characteristics

End-use applications and market opportunities



Competitive landscape and company strategies

Technology roadmaps and future outlook

Regional market analysis

Regulatory considerations

Sustainability metrics and environmental impact

The report segments the market by:

Material Type:

Bio-based chemicals and intermediates

Bio-based polymers and plastics

Natural fiber composites

Sustainable construction materials

Bio-based packaging

Sustainable textiles

Bio-based adhesives and coatings

Sustainable electronics

End-Use Markets:

Packaging

Construction

Automotive



Textiles & Apparel

Electronics

Consumer Products

Industrial Applications

Geographic Regions:

North America

Europe

Asia Pacific

Rest of World



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Figure 299. Classification of aerogels.

Figure 300. Flower resting on a piece of silica aerogel suspended in mid air by the flame



of a bunsen burner.

Figure 301. Monolithic aerogel.

Figure 302. Aerogel granules.

Figure 303. Internal aerogel granule applications.



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