

ANMD-MRS33-325 · Sustainable Packaging Innovations

Bio-Based Packaging Resins

A Global Sustainability Due Diligence & Market Research Study

History 2020–2024 · Base Year 2025 · Forecast 2025–2032 · Outlooks 2035 / 2040 / 2050 · Currency US\$

WHY THIS REPORT

Bio-based packaging resins replace fossil polymers with renewable-feedstock materials — bio-PE/bio-PET, PLA and PHA — for rigid packaging, flexible films and bottles. This decision-grade study sizes the global market three ways — value, tonnes produced and resin volume — across resin type, structure and application, across seven regions and four scenarios to 2032, with outlooks to 2050.

SUSTAINABILITY & SDG IMPACT — THE ANMD LENS

Sustainability is this report's backbone, not an afterthought. Beyond substitution, bio-based resins deliver measurable fossil-feedstock reduction, carbon savings and recyclability or compostability, while renewable sourcing strengthens the natural-capital story.

Mapped Sustainable Development Goals:

SDG 2 Zero Hunger	SDG 6 Clean Water	SDG 7 Affordable Clean Energy	SDG 13 Climate Action	SDG 15 Life on Land
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Measurable sustainability outcomes assessed:

- Lower fossil dependence through renewable-feedstock polymers
- Reduced carbon versus conventional fossil resins
- Recyclability or compostability matched to end-of-life systems
- Feedstock land-use, food-competition and recycling-stream compatibility as material risks

Framework alignment: Double materiality mapped to GRI, SASB, ISSB, TCFD, TNFD, CSRD and the EU Taxonomy, with greenwashing and SDG-washing screens applied throughout.

WHAT'S INSIDE AT A GLANCE

53 Chapters	9 Report Parts	7 Regions Covered	40+ Country Markets
2025–32 Forecast Horizon	4 Forward Scenarios	25+ Companies Profiled	5 SDGs Mapped

REPORT COVERAGE

Geographic scope: North America, Europe, Asia Pacific, Latin America, Africa, Middle East and Rest of World — with named country intelligence. Europe leads policy-driven adoption; Asia Pacific is the scale engine on feedstock and capacity; North America accelerates on brand demand for drop-in resins.

MARKET OVERVIEW

Scaling as brands seek fossil-free polymers — drop-in recyclable versus compostable, chosen by end-of-life.

The bio-based packaging resin market is scaling as brands seek fossil-free polymers. Demand is driven by the convergence of decarbonisation targets with plastic regulation and renewable-content mandates, supported by expanding biopolymer capacity. The market is read three ways — value, tonnes produced and resin volume — and forecast under four scenarios, each region reported separately.

- Europe leads policy-driven adoption — Germany, Italy, France and the Nordics, on renewable-content targets and EPR
- Asia Pacific is the scale engine — China, Thailand, Japan and India on feedstock access and PLA / bio-PE capacity
- Resin type and application segment the value — across bio-PE/bio-PET, PLA and PHA resins
- Drop-in versus compostable is the differentiator — brands choose by end-of-life system, not one-size-fits-all

REGIONAL OUTLOOK

Across seven reporting regions, the report separates early commercialisation leaders from high-growth and emerging markets — each profiled in full rather than aggregated into Rest of World.

Region	Stage	Lead Markets & Drivers
Europe	Policy leader	Germany, Italy, France, Nordics — renewable-content targets, EPR, biopolymer investment
Asia Pacific	Scale engine	China, Thailand, Japan, India — feedstock access, PLA and bio-PE capacity
North America	Accelerating	United States, Canada — brand commitments, drop-in bio-PET / bio-PE demand
Latin America	Emerging	Brazil — sugarcane bio-PE feedstock, resin production
Africa	Frontier	South Africa — feedstock potential, packaging demand
Middle East	Frontier	UAE, Saudi Arabia — petrochemical-to-biopolymer diversification

KEY MARKET DRIVERS & RESTRAINTS

Drivers	Restraints
<ul style="list-style-type: none"> • Decarbonisation and fossil-reduction targets • Renewable / recycled-content mandates • Brand commitments and plastic regulation • Biopolymer capacity and cost-down • Feedstock innovation and PHA scale-up 	<ul style="list-style-type: none"> • Price premium versus fossil resins • Feedstock land-use and food-competition concerns • Recycling-stream compatibility and sorting • Performance and processing trade-offs • Capacity and supply-chain constraints

SEGMENTATION SNAPSHOT

By Resin Type	Bio-PE / bio-PET · PLA resins · PHA resins
By Structure	Drop-in (recyclable) · compostable · hybrid
By Component	Renewable feedstocks · monomers · polymerisation · compounding · additives
By Application	Rigid packaging · flexible films · bottles
By End User	Converters · brand owners · resin compounders · packaging makers
By Deployment Scale	Pilot · distributed · commercial-scale

TABLE OF CONTENTS — PARTS & CHAPTERS

The full report is organised into nine parts across 53 chapters, listed below. Detailed sub-headings, country tables and directories are provided in the full report.

Part I — Report Foundation, Discovery and Strategic Intelligence

- › Chapter 1. Scope, Methodology and Report Architecture
- › Chapter 2. Industry Discovery Summary — Bio-Based Packaging Resins
- › Chapter 3. Executive Intelligence and Decision Dashboard
- › Chapter 4. Strategic Findings, Materiality and Investment Verdict Preview

Part II — Market Intelligence, Sizing, Forecasting and Segmentation

- › Chapter 5. Industry Overview and Market Evolution
- › Chapter 6. Market Dynamics
- › Chapter 7. Global Market Size and Forecast, 2020–2032
- › Chapter 8. Market Segmentation Analysis
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- › Chapter 10. Pricing, Cost and Commercial Model Intelligence

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- › Chapter 21. Category-Specific Intelligence Module
- › Chapter 22. Research, Innovation and Funding Landscape

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- › Chapter 44. Risk Register, RAG Rating and Anti-Greenwashing Screen
- › Chapter 45. Bottom-Line Verdict and Strategic Recommendations
- › Chapter 46. Implementation Roadmap and Stakeholder Playbooks

Part IX — Annexes, Directories and Reference Material

- › Chapter 47. Methodology Annex
- › Chapter 48. Corporate Directory and Company Intelligence Annex
- › Chapter 49. Patent Directory and Patent Intelligence Annex
- › Chapter 50. Project Intelligence Annex
- › Chapter 51. Forecast Annex
- › Chapter 52. Sustainability KPI Annex
- › Chapter 53. Reference Annexes

COMPETITIVE & INVESTMENT SNAPSHOT

The competitive field spans biopolymer producers, petrochemical majors and compounding specialists. Deal activity — biopolymer capacity expansion, feedstock partnerships and offtake agreements — signals a market consolidating around bankable, repeatable designs.

Representative players profiled in the full report:

NatureWorks LLC · Total Corbion PLA bv · Braskem S.A. · Danimer Scientific, Inc. · BASF SE · and further profiled players across the value chain.

Investment intelligence: venture, infrastructure, development, climate and blended finance, green bonds and sustainability-linked loans — culminating in a bankability assessment and a clear, condition-based investment view.

KEY QUESTIONS THIS REPORT ANSWERS

- ? How large is the global bio-based packaging resins market, and how fast will it grow to 2032?
- ? Which regions, countries and segments offer the strongest risk-adjusted opportunity?
- ? Who leads, and where is the competitive and patent white space?
- ? Is the investment case bankable — and under what conditions?
- ? How does the technology align with the SDGs and emerging disclosure regulation?

WHY ANMD — THE DIFFERENCE

Most market studies stop at units and revenue. This report is built as a sustainability due diligence instrument — fusing market sizing with ESG, SDG, climate, water and natural-capital intelligence and a decision-ready bankability assessment in a single architecture.

- › **Triangulated sizing** — every market read three ways (value, tonnes produced and resin volume) so value, volume and resin volume views reconcile rather than conflict.
- › **Region-honest forecasting** — Latin America, Africa and the Middle East reported in full, never hidden inside Rest of World, every forecast resolved to the 2025 base year.
- › **Integrated evidence base** — company, patent and project databases linked to the analysis, with published-filing patents and FTO treated as an indicator, not a legal conclusion.
- › **No-fabrication discipline** — every estimate carries a data-confidence rating and disclosed sources; gaps are flagged for further diligence, never filled with invented numbers.
- › **Anti-greenwashing rigour** — SDG-washing and greenwashing screens plus claim-substantiation checks built into the ESG and project analysis.
- › **Decision-first structure** — 9 Parts and 53 Chapters culminating in stakeholder playbooks and a clear, condition-based bankability view.

WHO SHOULD BUY THIS REPORT

Investors and infrastructure / PE funds, resin producers, compounders, converters, brand owners, packaging manufacturers, lenders, policymakers, and corporate strategy and ESG teams.

Access the Full Report

The complete report delivers all 53 chapters in full, with every sub-heading, country table, company and patent directory, forecast model and due diligence checklist.

Purchase at www.anewmarketdynamics.com · Standard & Premium licences · Single-Site (SSL) and Global-Site (GSL) options at checkout.

Want the Complete Detailed Table of Contents?

This prospectus lists the nine parts and 53 chapters. The complete detailed table of contents — every sub-heading, country table, exhibit, company and patent directory and annex — is available on request to registered users. To receive it, register with your official company email at www.anewmarketdynamics.com. The full detailed table of contents will be sent directly to your registered company email address.