



## ANMD-MRS2-017 · Advanced Building Materials

# Geopolymer Concrete

*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

Geopolymer concrete replaces Portland-cement binder with alkali-activated industrial by-products, turning fly ash and slag into low-carbon, durable concrete. This decision-grade study sizes the global market three ways — value, volume (m<sup>3</sup>) and capacity (thousand m<sup>3</sup>) — across binder type, process 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 performance, geopolymer concrete delivers measurable deep embodied-carbon cuts, waste valorisation and high durability, while industrial by-product reuse and clinker avoidance strengthen the natural-capital story.

### Mapped Sustainable Development Goals:

<b>SDG 9</b> Industry & Innovation	<b>SDG 11</b> Sustainable Cities	<b>SDG 12</b> Responsible Consumption	<b>SDG 13</b> Climate Action
---------------------------------------	-------------------------------------	--	---------------------------------

### Measurable sustainability outcomes assessed:

- Deep embodied-carbon cuts versus Portland-cement concrete
- Waste valorisation of fly ash and slag by-products
- High chemical durability for demanding environments
- Embodied carbon, circularity and supply-chain sourcing 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

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

## REPORT COVERAGE

**Geographic scope:** North America, Europe, Asia Pacific, Latin America, Africa, Middle East and Rest of World — with named country intelligence. Asia Pacific is the volume leader (China, India, Australia) on by-product supply and infrastructure; Europe is policy-led on low-carbon codes and EPDs; other regions assessed on their own merits.



## MARKET OVERVIEW

### From early adoption to mainstream scale — where industrial by-products replace clinker in durable concrete.

The geopolymer concrete market is moving from early adoption to mainstream commercial scale. Demand is driven by cement decarbonisation converging with embodied-carbon rules and green-building codes, supported by maturing incentives across Asia Pacific, Europe and North America. The market is read three ways — value, volume (m<sup>3</sup>) and capacity (thousand m<sup>3</sup>) — and forecast under four scenarios, each region reported separately.

- Asia Pacific is the volume leader — China, India and Australia, on by-product supply and infrastructure demand
- Europe is policy-led — Germany, United Kingdom and the Netherlands, on low-carbon codes and EPDs
- Whole-life carbon is the differentiator — lower embodied carbon plus durability, increasingly with green-premium value
- Binder type and application segment the value across fly-ash, slag, metakaolin and hybrid systems

## 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
Asia Pacific	Volume leader	China, India, Australia — by-product supply, infrastructure
Europe	Policy-led	Germany, United Kingdom, Netherlands — low-carbon codes, EPD
North America	Accelerating	United States, Canada — durability, low-carbon procurement
Middle East	High-growth	Saudi Arabia, UAE — marine durability, construction
Latin America	Emerging	Brazil, Chile — slag/ash supply, infrastructure
Africa	Emerging	South Africa — industrial by-products, civil works

## KEY MARKET DRIVERS & RESTRAINTS

Drivers	Restraints
<ul style="list-style-type: none"> <li>• Cement-decarbonisation + waste-valorisation convergence</li> <li>• Embodied-carbon reduction &amp; lifecycle savings</li> <li>• Policy incentives (EPD, green-building codes, carbon rules)</li> <li>• Developer &amp; contractor cost-and-compliance economics</li> <li>• Material, process &amp; performance technology gains</li> </ul>	<ul style="list-style-type: none"> <li>• Cost premium vs conventional material</li> <li>• Performance, standards &amp; certification hurdles</li> <li>• Building-code, approval &amp; specification rules</li> <li>• Raw-material &amp; energy cost inflation</li> <li>• Specifier adoption, financing &amp; code-update lag</li> </ul>



## SEGMENTATION SNAPSHOT

<b>By Binder Type</b>	Fly ash-based · slag-based · metakaolin-based · hybrid alkali-activated · precast
<b>By Process</b>	Alkali activation · ambient curing · precast casting
<b>By Application</b>	Precast elements · infrastructure & civil · marine & industrial
<b>By End User</b>	Builders & contractors · developers · precasters · architects · public works
<b>By Business Model</b>	Direct sale · distributor · project-supply · specification-led
<b>By Scale</b>	Project · regional · national supply

## 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 — Geopolymer Concrete
- › 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
- › Chapter 9. End-User and Demand-Side Intelligence
- › Chapter 10. Pricing, Cost and Commercial Model Intelligence

### Part III — Regional and Country Intelligence

- › Chapter 11. Global Regional Intelligence Framework
- › Chapter 12. North America Market Intelligence
- › Chapter 13. Europe Market Intelligence
- › Chapter 14. Asia Pacific Market Intelligence
- › Chapter 15. Latin America Market Intelligence
- › Chapter 16. Africa Market Intelligence
- › Chapter 17. Middle East Market Intelligence
- › Chapter 18. Rest of World Market Intelligence

### Part IV — Technology, Innovation and Category-Specific Intelligence

- › Chapter 19. Technology Landscape and Architecture
- › Chapter 20. Emerging and Next-Generation Technology Intelligence
- › Chapter 21. Category-Specific Intelligence Module
- › Chapter 22. Research, Innovation and Funding Landscape



## Part V — Company, Competition, Patent and Project Intelligence

- › Chapter 23. Competitive Landscape
- › Chapter 24. Company Profiles
- › Chapter 25. Mergers, Acquisitions, Partnerships and Ecosystem Intelligence
- › Chapter 26. Patent Landscape and Intellectual Property Intelligence
- › Chapter 27. Project, Deployment and Case-Study Intelligence

## Part VI — Sustainability, ESG, SDG, Climate and Natural-Capital Intelligence

- › Chapter 28. Sustainability Intelligence Suite
- › Chapter 29. ESG Intelligence and Double Materiality
- › Chapter 30. ESG and Sustainability Framework Alignment
- › Chapter 31. SDG Intelligence
- › Chapter 32. Carbon, Net-Zero and Climate-Mitigation Intelligence
- › Chapter 33. Water, Biodiversity and Natural-Capital Intelligence
- › Chapter 34. Circular Economy and Resource-Security Intelligence
- › Chapter 35. Social Impact, Human Capital and Community Intelligence
- › Chapter 36. Climate Risk, Adaptation and Resilience Intelligence

## Part VII — Supply Chain, Policy, Legal, Economics and Finance

- › Chapter 37. Value Chain, Supply Chain and Geopolitical Intelligence
- › Chapter 38. Policy, Regulation and Incentive Intelligence
- › Chapter 39. Legal, Contracting and Risk-Allocation Intelligence
- › Chapter 40. Unit Economics, CAPEX, OPEX and Return Analysis
- › Chapter 41. Investment, Sustainable Finance and Bankability Intelligence

## Part VIII — Scenario, Future Intelligence and Final Due Diligence Verdict

- › Chapter 42. Scenario Analysis and Future Intelligence
- › Chapter 43. Sustainability Due Diligence Framework and Data-Room Index
- › 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 specialist geopolymers concrete producers, established materials majors, and regional manufacturers. Deal activity — capacity investment, technology licensing and demonstration projects — signals a market consolidating around bankable, scalable production.

### Representative players profiled in the full report:

Wagners Holding Company Limited · Zeobond Pty Ltd · Holcim Ltd · Heidelberg Materials AG · Betolar Oyj · and 20+ further profiled players across producers, technology licensors and admixture suppliers.

**Investment intelligence:** venture, infrastructure, development, climate and blended finance, green bonds and sustainability-linked loans — culminating in a bankability assessment and a Go / No-Go / Conditional-Go investment verdict.



## KEY QUESTIONS THIS REPORT ANSWERS

---

- ? How large is the global geopolymers concrete market, and how fast will it grow to 2032?
- ? Which regions, countries and segments offer the strongest risk-adjusted opportunity?
- ? How does whole-life carbon change value versus conventional materials?
- ? Who leads, and where is the competitive and patent white space?
- ? Is the investment case bankable — and under what conditions?
- ? How does the material align with the SDGs, green-building codes and 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 verdict in a single architecture.*

- › Triangulated sizing — every market read three ways so value, volume and area 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 Go / No-Go / Conditional-Go investment verdict.

## WHO SHOULD BUY THIS REPORT

---

Investors and infrastructure / PE funds, material producers and manufacturers, builders, developers and contractors, architects and specifiers, green-building certifiers, 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](http://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](http://www.anewmarketdynamics.com). The full detailed table of contents will be sent directly to your registered company email address.