+357 96 030922
info@marketpublishers.com

Self-Healing Concrete Market Forecasts to 2030 – Global Analysis by Type (Biotic, Sodium Silicate Based, Abiotic, Bacteria Based, Fungus Based and Other Types), Form, Application and By Geography

https://marketpublishers.com/r/S52ED57F5AC7EN.html
Date: February 2025
Pages: 150
Price: US$ 4,150.00 (Single User License)
ID: S52ED57F5AC7EN

Abstracts

According to Stratistics MRC, the Global Self-Healing Concrete Market is accounted for $69.6 billion in 2024 and is expected to reach $390.6 billion by 2030 growing at a CAGR of 33.3% during the forecast period. Self-healing concrete is a type of concrete that has the ability to repair its own cracks or damage over time, enhancing its durability and lifespan. It contains specific materials, such as microcapsules, bacteria, or polymers that activate when cracks form. These materials release healing agents like calcium carbonate or adhesives that fill and seal the cracks, preventing further damage and reducing the need for maintenance. Self-healing concrete is used in various applications, including infrastructure like bridges, roads, and buildings, where it can improve the long-term performance of concrete structures, reducing repair costs and environmental impact.

According to the United Nations, nearly 68% of the world’s population is projected to live in urban areas by 2050, further intensifying the demand for robust construction materials.

Market Dynamics:

Driver:

Rising Infrastructure Investment

Rising infrastructure investment is a major catalyst for the self-healing concrete

+357 96 030922
info@marketpublishers.com

business. Building materials that are long-lasting, economical, and environmentally friendly are in greater demand as governments and the private sector invest more money in infrastructure development. Self-healing concrete is a desirable option since it lowers maintenance costs and increases the lifetime of structures. It is well-known for its capacity to patch cracks on its own. The market's expansion is further aided by this tendency, which is especially noticeable in building, bridge, and road construction projects.

Restraint:

High Initial Costs

Self-healing concrete's high initial costs limit its widespread use. When compared to traditional concrete, the cost is substantially higher because to the sophisticated materials and processes needed for its creation. It is less appealing to construction businesses because of this financial barrier, especially in regions where costs are a concern. Even with its long-term advantages, such less repairs and maintenance, the initial outlay is still a major obstacle in the market for self-healing concrete, thus it limits the growth of the market.

Opportunity:

Durability and Longevity

Durability and longevity are major drivers in the self-healing concrete business, as they improve the material's capacity to fix cracks on its own, prolonging its lifespan and lowering maintenance costs. Since self-healing concrete provides long-term resistance against environmental stressors including moisture and temperature variations, the market is further boosted by the growing need for sustainable building techniques. It is a popular option for infrastructure projects, especially in hard or high-damage conditions, because of its capacity to reduce repairs and maintenance, which helps to save costs.

Threat:

Compatibility Issues

Compatibility difficulties with materials used in self-healing concrete can stifle industry expansion. Concrete's capacity to mend itself may be jeopardized by inconsistent performance from the healing agents, concrete mix, and surrounding environment.

+357 96 030922
info@marketpublishers.com

These difficulties necessitate a great deal of testing and optimization, which can raise expenses and delay implementation. Furthermore, integration with existing infrastructure and meeting regulatory standards poses additional barriers to widespread use.

Covid-19 Impact:

The COVID-19 pandemic negatively impacted the Self-Healing Concrete market due to disruptions in construction activities, delayed projects, and supply chain challenges. However, the demand for sustainable and cost-effective materials remained, as industries recognized the long-term benefits of self-healing concrete for infrastructure durability. Post-pandemic recovery has accelerated investments in innovative building technologies, boosting the market's growth prospects as construction activities resume and environmental concerns increase.

The fungus based segment is expected to be the largest during the forecast period

The fungus based segment is expected to be the largest during the forecast period as their ability to enhance durability and reduce maintenance costs. Fungi, particularly bacterial strains, can produce minerals like calcium carbonate when activated by moisture, filling cracks and restoring structural integrity. This natural healing process improves the lifespan of concrete, making it a sustainable and cost-effective solution. The growing focus on eco-friendly construction materials and the need for long-lasting infrastructure are key factors boosting the market for fungus-based self-healing concrete.

The intrinsic segment is expected to have the highest CAGR during the forecast period

The intrinsic segment is expected to have the highest CAGR during the forecast period due to properties such as the self-healing ability of concrete. These properties enable the concrete to repair cracks autonomously, enhancing the material's durability and longevity. The inherent ability to heal without external intervention reduces maintenance costs and extends the lifespan of structures, making it increasingly attractive for infrastructure projects. Additionally, these properties contribute to sustainability efforts by reducing the need for frequent repairs, thereby lowering environmental impact and supporting green construction practices.

Region with largest share:

+357 96 030922
info@marketpublishers.com

North America is anticipated to hold the largest market share during the forecast period because of the rising demand for environmentally friendly building materials, the greater emphasis on maintaining and repairing infrastructure, and developments in material science. The desire to improve the longevity and durability of concrete structures, government legislation encouraging green construction methods, and the region's aging infrastructure are important issues. Additionally, advancements in self-healing technologies, such as systems based on bacteria or capsules, aid in the market's growth.

Region with highest CAGR:

Asia Pacific is anticipated to witness the highest CAGR over the forecast period owing to demand for durable infrastructure due to rapid urbanization and infrastructure development. Rising awareness of sustainable construction practices, coupled with the need to reduce maintenance costs, is propelling market growth. Government initiatives to promote green and energy-efficient building materials, along with advancements in nanotechnology and microbial-based healing agents, further contribute to the adoption of self-healing concrete in the region’s construction and civil engineering sectors.

Key players in the market

Some of the key players in Self-Healing Concrete market include BASF SE, Basilisk, Cemex, Corbion, Fescon Oy, GCP Applied Technologies Inc., Giatec Scientific Inc., Green-Basilisk BV, Hycrete, Inc., Kryton International Inc., Kwik Bond Polymers, Oscrete Construction Products, PENETRON, Polycoat Products, Sika AG, Wacker Chemie AG and Xypex Chemical Corporation.

Key Developments:

In July 2024, BASF launched Haptex 4.0, an innovative polyurethane solution for the production of synthetic leather that is 100% recyclable. Synthetic leather made with Haptex 4.0 and polyethylene terephthalate (PET) fabric can be recycled together using an innovative formulation and recycling technical pathway without the need of layer peel-off process.

In June 2024, CPGC and BASF signed framework agreement on actual ship application of onboard carbon capture system, to steer the low-carbon transformation and foster the sustainable development of the shipping industry.

+357 96 030922
info@marketpublishers.com

In May 2024, BASF expanded its biomass balance offering to include BMBCertTM 1,4-butanediol (BDO), tetrahydrofuran (THF), polytetrahydrofuran (PolyTHF®) and 3-(dimethylamino)propylamine (DMAPA). In addition to the production site in Ludwigshafen, Germany, the site in Geismar, Louisiana, has also achieved certifications for all these products.

Types Covered:

- Biotic
- Sodium Silicate Based
- Abiotic
- Bacteria Based
- Fungus Based
- Other Types

Forms Covered:

- Intrinsic
- Extrinsic
- Capsule Based
- Vascular

Applications Covered:

- Residential
- Commercial
- Infrastructure

+357 96 030922
info@marketpublishers.com

- Industrial
- Marine
- Other Applications

Regions Covered:

- North America
  - US
  - Canada
  - Mexico
- Europe
  - Germany
  - UK
  - Italy
  - France
  - Spain
  - Rest of Europe
- Asia Pacific
  - Japan
  - China
  - India

+357 96 030922
info@marketpublishers.com

- Australia
- New Zealand
- South Korea
- Rest of Asia Pacific

South America

- Argentina
- Brazil
- Chile
- Rest of South America

Middle East & Africa

- Saudi Arabia
- UAE
- Qatar
- South Africa
- Rest of Middle East & Africa

What our report offers:
- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2022, 2023, 2024, 2026, and 2030
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market

+357 96 030922
info@marketpublishers.com

estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

+357 96 030922
info@marketpublishers.com

Contents

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

9 KEY DEVELOPMENTS

10 COMPANY PROFILING

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

List Of Tables

LIST OF TABLES

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

I would like to order

Product name: Self-Healing Concrete Market Forecasts to 2030 – Global Analysis by Type (Biotic, Sodium Silicate Based, Abiotic, Bacteria Based, Fungus Based and Other Types), Form, Application and By Geography

Product link: https://marketpublishers.com/r/S52ED57F5AC7EN.html

Price: US$ 4,150.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:
info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page https://marketpublishers.com/r/S52ED57F5AC7EN.html