

Composite Rebar Market Forecasts to 2032 – Global Analysis By Product (Glass Fiber Reinforced Polymer (GFRP), Carbon Fiber Reinforced Polymer (CFRP) and Aramid Fiber Reinforced Polymer (AFRP)), Resin Type, Diameter, Application, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Composite Rebar Market is accounted for \$2.6 billion in 2025 and is expected to reach \$4.8 billion by 2032 growing at a CAGR of 8.9% during the forecast period. Composite rebar is a type of reinforcement bar made from a combination of materials such as fiberglass, carbon fiber, or other polymers, often with a resin matrix. Unlike traditional steel rebar, composite rebar is lightweight, non-corrosive, and offers higher strength-to-weight ratios. It is commonly used in construction projects, particularly in environments where corrosion from moisture or chemicals is a concern, such as in bridges, marine structures, and concrete pavements. The durability and resistance to corrosion make composite rebar a preferred choice for long-lasting, low-maintenance infrastructure projects.

Market Dynamics:

Driver:

Corrosion Resistance in Harsh Environments

The corrosion resistance of composite rebar in harsh environments significantly drives its market growth. Unlike steel, composite rebar does not rust, ensuring durability and reducing long-term maintenance costs in infrastructure exposed to moisture, chemicals,

or saltwater. This advantage makes it ideal for bridges, marine structures, and industrial facilities, where environmental conditions are extreme. As industries increasingly prioritize longevity and sustainability, the demand for corrosion-resistant materials like composite rebar continues to rise, fueling innovation and expanding market opportunities globally.

Restraint:

High Initial Cost Compared to Steel Rebar

The high initial cost of composite rebar compared to traditional steel rebar significantly hinders its adoption in the market. Despite its long-term benefits like corrosion resistance and durability, the upfront expense remains a barrier for many construction projects, particularly in cost-sensitive sectors. This price discrepancy limits the widespread use of composite rebar, as businesses and contractors often opt for the more affordable steel rebar, delaying its market growth.

Opportunity:

Rising Infrastructure Investments

Rising infrastructure investments are positively impacting the composite rebar market by driving demand for durable, corrosion-resistant, and lightweight materials in construction projects. As governments and private sectors expand transportation, water management, and energy infrastructure, composite rebar emerges as a preferred alternative to traditional steel. Its longer lifespan, reduced maintenance costs, and compatibility with harsh environments make it ideal for modern infrastructure needs. This growing preference accelerates market growth and fosters innovation in composite reinforcement technologies worldwide.

Threat:

Lack of Standardization and Regulatory Support

The lack of standardization and regulatory support in the Composite Rebar Market hinders widespread adoption and growth. Inconsistent quality standards across regions lead to uncertainty about material performance, limiting confidence among builders and engineers. The absence of uniform regulations delays product approvals and complicates market entry for manufacturers. This fragmentation hampers the market's

expansion, increasing costs and inhibiting innovation, as stakeholders struggle to navigate a complex regulatory landscape.

Covid-19 Impact

The COVID-19 pandemic initially disrupted the Composite Rebar Market due to halted construction projects, labor shortages, and supply chain interruptions. However, as recovery efforts progressed, infrastructure investments and government stimulus packages reignited demand. The market adapted with increased automation and digitalization, leading to renewed growth. Post-pandemic, the focus on resilient and sustainable construction further accelerated the adoption of composite rebar across critical infrastructure projects.

The marine structures segment is expected to be the largest during the forecast period

The marine structures segment is expected to account for the largest market share during the forecast period, as Composite rebars outperform steel in marine applications like seawalls, docks, and offshore platforms, reducing maintenance costs and extending infrastructure life. Their lightweight nature also simplifies transport and installation, further enhancing efficiency. As coastal development and climate resilience projects grow globally, demand for durable, non-corrosive materials like composite rebar in marine structures continues to surge, boosting market expansion.

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

Over the forecast period, the polyester segment is predicted to witness the highest growth rate, due to demand for cost-effective, corrosion-resistant alternatives to traditional steel. Its excellent durability, chemical resistance, and lightweight properties make it ideal for infrastructure projects in harsh environments, such as marine and industrial applications. Polyester composite rebar also offers easy handling and installation, reducing labor and transportation costs. As construction sectors increasingly seek sustainable and long-lasting materials, polyester-based solutions continue to gain traction, fueling growth of the market.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share due to rising infrastructure development, corrosion resistance advantages, and

demand for durable, lightweight construction materials. Governments' focus on sustainable and long-lasting infrastructure, especially in coastal and seismic-prone areas, fuels adoption. Additionally, rapid urbanization and smart city initiatives across countries like China, India, and Japan are boosting demand. This market trend not only enhances structural integrity but also contributes to lower maintenance costs and extended infrastructure lifespans.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR, because its lightweight nature reduces transportation costs and simplifies installation, driving construction efficiency. Widely adopted in highways, bridges, and marine structures, composite rebar enhances structural longevity and reduces maintenance needs. As sustainability and resilience gain priority, the market supports green construction initiatives and boosts economic development through innovation and job creation, ultimately reinforcing North America's leadership in advanced construction materials.

Key players in the market

Some of the key players profiled in the Composite Rebar Market include Armastek, Pultron Composites, Marshall Composite Technologies, Schoeck Bauteile GmbH, Dextra Group, BP Composites (TUFF-Bar), FiReP Rebar Technology GmbH, Kodiak Fiberglass Rebar LLC, Fiberline Composites, Technobasalt-Invest LLC, Tribeni Fiber Pvt. Ltd., Captrad, Sireg Geotech Srl, Composite Group Chelyabinsk LLC, Galen LLC, Nanjing Fenghui Composite Material Co., Ltd., Hughes Brothers Inc, Owens Corning and MRG Composites India Pvt. Ltd.

Key Developments:

In January 2025, Normet International Ltd and Dextra Group signed a Memorandum of Understanding (MoU) to collaborate on developing sustainable Fibre Reinforced Polymer (FRP) reinforcement solutions for underground mining and tunnelling applications.

In February 2025, Arkema, in collaboration with Sireg Geotech, has introduced a groundbreaking innovation in concrete reinforcement: the world's first bendable composite rebar utilizing Arkema's Elium® thermoplastic resin. This development offers a sustainable and high-performance alternative to traditional steel reinforcement,

addressing long-standing challenges in the construction industry.

Products Covered:

Glass Fiber Reinforced Polymer (GFRP)

Carbon Fiber Reinforced Polymer (CFRP)

Basalt Fiber Reinforced Polymer (BFRP)

Aramid Fiber Reinforced Polymer (AFRP)

Resin Types Covered:

Vinyl Ester

Epoxy

Polyester

Other Resin Types

Diameters Covered:

Up to 6 mm

6 mm – 12 mm

12 mm – 20 mm

Above 20 mm

Applications Covered:

Highways, Bridges, and Tunnels

Marine Structures

Industrial and Commercial Construction

Residential Construction

Water Treatment Plants

Other Applications

End Users Covered:

Military & Defense

Mining

Other End Users

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

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 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

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