

Glass Fiber Reinforced Plastic (GFRP) Composites Market to Reach USD 47.3 Billion by 2035

Global demand is likely to grow steadily, the market is projected to grow from USD 21.7 Billion in 2025 to USD 47.3 Billion in 2035

NEWARK, DE, UNITED STATES,
November 7, 2025 /EINPresswire.com/
-- The global [Glass Fiber Reinforced Plastic \(GFRP\) Composites Market](#) is set for significant transformation, projected to grow from USD 21.7 billion in 2025 to USD 47.3 billion by 2035, registering a compound annual growth rate (CAGR) of 8.1%, according to industry analysis. The surge is

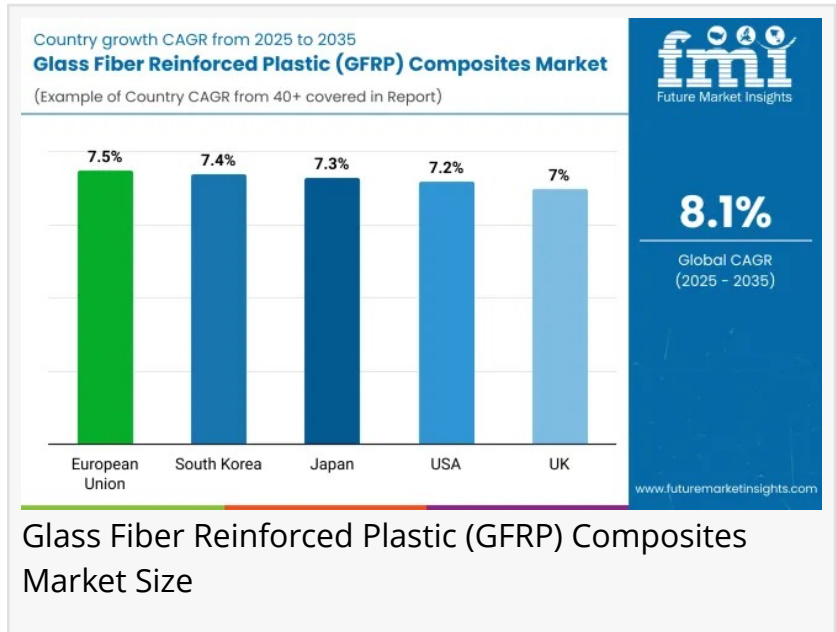
propelled by robust adoption across construction, transportation, renewable energy, and industrial applications, supported by green policies, rapid industrialization, and advances in resin technology.

Lightweight, corrosion-resistant, and high-strength GFRP composites are increasingly replacing traditional materials such as steel and aluminum—ushering in a new era of durable, sustainable manufacturing in multiple regions.

Sustainability and Performance at the Core of Market Growth

The shift toward lightweighting and emission reduction across industries is a critical growth catalyst. Governments and automakers worldwide are targeting net-zero emissions, driving demand for materials that enhance energy efficiency. In transportation, GFRP composites are enabling automakers to cut vehicle weight by up to 30%, significantly improving fuel economy and EV range.

In renewable energy, GFRP materials are indispensable for wind turbine blades, where lightweight yet durable components enhance aerodynamic performance and minimize



maintenance costs. According to the American Wind Energy Association (AWEA), the U.S. wind industry's continued expansion is expected to keep GFRP demand strong over the next decade.

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Material Innovation: Epoxy and Polyester Resins Lead the Way

The GFRP market is primarily driven by two resin systems—epoxy and polyester—which collectively dominate over 60% of the market share.

- Epoxy-based GFRP composites deliver exceptional adhesion, fatigue resistance, and thermal stability, making them ideal for aerospace, wind energy, and high-speed rail components. The material's ability to enhance impact resistance while maintaining lightweight performance continues to attract OEMs in the automotive and aerospace sectors.
- Polyester-based composites, favored for their low cost, rapid curing, and corrosion resistance, are seeing rising demand in construction, marine, and consumer goods. These composites deliver excellent UV stability and moisture protection, ideal for building facades, bridges, and water treatment infrastructure.

Emerging trends in bio-based, self-healing, and fire-resistant epoxy systems are expected to redefine sustainability benchmarks, aligning GFRP materials with global green manufacturing standards.

Regional Market Insights

Asia-Pacific (APAC): The Epicenter of Expansion

The Asia-Pacific GFRP composites market is projected to grow at the fastest CAGR globally, supported by rapid infrastructure growth, renewable energy installations, and transportation modernization.

- China leads global GFRP adoption, with heavy investment in wind power, EVs, and construction.
- India's infrastructure programs, including the Smart Cities Mission, are accelerating the use of GFRP rebars and bridge reinforcements.
- Japan and South Korea are leveraging GFRP in aerospace, high-speed rail, and electric vehicle manufacturing, supported by robust R&D ecosystems and AI-assisted composite design.

According to the forecast, Japan (CAGR 7.3%) and South Korea (7.4%) will remain key contributors to regional growth through 2035.

Europe: Green Energy and Lightweight Mobility Drive Adoption

Europe remains at the forefront of sustainable composite innovation, driven by the EU Green Deal and aggressive carbon neutrality goals.

- Germany, France, and the UK are integrating GFRP materials into EVs, wind energy projects, and modular green construction.
- Leading automakers like Volkswagen and BMW are substituting steel with glass fiber composites to meet stringent EU emission standards.
- The European Union market, projected to grow at 7.5% CAGR, benefits from expanding offshore wind installations across Denmark and Spain, where GFRP blades enhance turbine durability in harsh marine environments.

United States: Lightweight Infrastructure and Wind Energy Surge

The U.S. GFRP composites market, expected to record 7.2% CAGR, is strengthened by infrastructure upgrades, renewable energy projects, and emission-focused automotive innovation.

- The Infrastructure Investment and Jobs Act (USD 1.2 trillion) has stimulated GFRP applications in bridges, transit systems, and pipelines, leveraging corrosion-resistant composites to extend structure lifespan.
- Automakers such as Ford, Tesla, and GM are integrating GFRP composites in frames, body panels, and battery enclosures to reduce vehicle weight and improve efficiency.
- Expanding offshore and onshore wind projects continue to drive demand for high-performance GFRP turbine blades, further positioning the U.S. as a global leader in composite innovation.

Saudi Arabia: Infrastructure Modernization and Energy Transition

Saudi Arabia's Vision 2030 initiative is catalyzing the adoption of GFRP composites in infrastructure, oil and gas, and renewable projects. The Kingdom's emphasis on low-maintenance, corrosion-resistant materials aligns with GFRP's unique advantages in desert and marine conditions.

- The country's ongoing investment in solar and wind farms is stimulating local composite manufacturing.
- In construction, GFRP rebars and panels are replacing traditional steel in bridges, desalination plants, and high-rise structures, improving lifespan and reducing lifecycle costs.

Technological and Market Shifts: 2020–2024 vs. 2025–2035

Between 2020 and 2024, the GFRP market focused on lightweight materials, AI-based quality control, and thermoplastic composites.

Looking ahead to 2035, the market will evolve toward AI-integrated smart materials, IoT-

embedded composites, and circular manufacturing systems. Emerging self-healing and recyclable GFRP composites are expected to become standard in high-performance industries, reflecting an industry-wide pivot toward smart sustainability.

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Competitive Landscape

The global market is moderately consolidated, with top players including:

- Owens Corning – 15–20% market share; leader in sustainable resin systems and fiber reinforcement.
- Saint-Gobain S.A. – 12–16%; specializes in glass fiber laminates and industrial composites.
- Jushi Group Co., Ltd. – 10–14%; a key supplier of high-strength glass fiber reinforcements.
- PPG Industries, Inc. – 8–12%; provides fiberglass-reinforced resins and automotive composites.
- Chongqing Polycomp International Corp. (CPIC) – 5–9%; focuses on aerospace-grade GFRP products.

These companies are actively investing in AI-driven materials optimization, bio-resin technology, and additive manufacturing to improve cost-efficiency and scalability.

Future Outlook: A Decade of Smart Composites and Circular Manufacturing

By 2035, AI-powered predictive modeling, robotic-assisted production, and bio-based resin systems will redefine the GFRP composites market. Smart, sensor-embedded composites will enable real-time structural monitoring in aircraft, bridges, and turbines, ensuring safety and extending operational life.

The combination of nanotechnology-enhanced reinforcements, recyclable resin systems, and energy-efficient manufacturing will transform the global GFRP ecosystem into a circular, sustainable, and high-performance industry—positioning it as a cornerstone of modern engineering and clean technology across APAC, Europe, USA, and Saudi Arabia.

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