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Advanced Composites Market Forecasts to 2032 – Global Analysis By Fiber Type (Carbon Fiber Composites, Glass Fiber Composites and Other Fiber Types), Resin Type, Manufacturing Process, Application, End User and By Geography

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Abstracts

According to Stratistics MRC, the Global Advanced Composites Market is accounted for $35.8 billion in 2025 and is expected to reach $66.8 billion by 2032 growing at a CAGR of 9.3% during the forecast period. Advanced composites are high-performance materials made by combining strong fibers—such as carbon, glass, or aramid—with a matrix like epoxy, polyester, or thermoplastic resin. These composites offer superior strength-to-weight ratios, corrosion resistance, and durability compared to traditional materials like metals. Widely used in aerospace, automotive, defense, and renewable energy sectors, advanced composites enable lightweight design, fuel efficiency, and enhanced structural integrity. Their customizable properties allow engineers to tailor performance for specific applications. As manufacturing technologies evolve, advanced composites continue to drive innovation in critical industries, supporting sustainable development and next-generation engineering solutions.

Market Dynamics:

Driver:

Electrification of Transportation

The shift toward electric vehicles is a major driver for the market. Lightweight materials are essential to improve battery efficiency, extend driving range, and reduce emissions. Advanced composites, especially carbon and glass fiber-reinforced polymers, offer

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superior strength-to-weight ratios ideal for EV structures, battery enclosures, and interior components. As governments push for cleaner mobility and automakers invest in electrification, demand for high-performance composites will surge, making them integral to next-generation transportation platforms across passenger, commercial and autonomous vehicle segments.

Restraint:

High Production Costs

Despite their advantages, advanced composites face a significant restraint in high production costs. Manufacturing processes like autoclaving and resin transfer molding require specialized equipment and skilled labor, increasing operational expenses. Raw materials such as carbon fiber and high-performance resins are also costly. These factors limit adoption, especially among small and mid-sized manufacturers. Additionally, long production cycles and complex quality assurance protocols add to the financial burden. Cost reduction through automation and material innovation remains critical to unlocking broader market potential.

Opportunity:

Next-Generation Aircraft Platforms

The development of next-generation aircraft platforms presents a major opportunity for the market. Aerospace manufacturers increasingly rely on composites to enhance fuel efficiency, and improve structural performance. Composites are used in fuselage panels, wings, engine nacelles, and interior components. With rising air travel demand and sustainability goals, aircraft OEMs are investing in composite-intensive designs. Innovations in thermoplastic composites and automated fabrication techniques further support scalability. This trend will drive significant growth across commercial aviation and space exploration sectors.

Threat:

Limited Recycling Infrastructure

A key threat to the advanced composites market is the limited infrastructure for recycling composite materials. Thermoset composites, in particular, pose challenges due to their cross-linked molecular structure, making them difficult to reprocess. As

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environmental regulations tighten and sustainability becomes a priority, the lack of efficient recycling solutions could hinder market growth. Disposal of composite waste from aerospace and automotive sectors raises ecological concerns. Thus, it hampers the growth of the market.

Covid-19 Impact:

The COVID-19 pandemic disrupted global supply chains and slowed production across aerospace and automotive sectors, impacting the advanced composites market. However, it also accelerated digital transformation and automation in manufacturing. Companies adopted agile production methods and localized sourcing to mitigate risks. Demand for lightweight, durable materials remained strong in medical devices and renewable energy applications. Post-pandemic recovery is expected to boost investment in resilient infrastructure and sustainable technologies, with advanced composites playing a pivotal role in rebuilding and future-proofing critical industries.

The glass fiber composites segment is expected to be the largest during the forecast period

The glass fiber composites segment is expected to account for the largest market share during the forecast period due to their cost-effectiveness and favorable mechanical properties. Widely used in automotive, construction, and wind energy sectors, glass fiber composites offer excellent corrosion resistance and durability. Their lower cost compared to carbon fiber makes them ideal for high-volume applications. Advancements in resin systems and molding techniques have expanded their use in structural and semi-structural components. As demand for lightweight materials grows, glass fiber composites will maintain a strong market presence.

The injection molding process segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the injection molding process segment is predicted to witness the highest growth rate owing to its efficiency and scalability. This process enables rapid production of complex composite parts with high dimensional accuracy and repeatability. It is particularly suited for thermoplastic composites used in automotive and industrial applications. Injection molding supports automation and integration with hybrid materials, reducing cycle times and costs. As manufacturers seek faster, more economical production methods, the adoption of injection molding for advanced composites will accelerate.

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Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share because of rapid industrialization, infrastructure development, and expanding aerospace and automotive sectors. Countries like China, India, and Japan are investing heavily in lightweight materials for transportation, renewable energy, and defense. Government initiatives promoting clean energy and electric mobility further boost demand. The region also benefits from a strong manufacturing base, skilled labor, and growing R&D capabilities. These factors position Asia Pacific as a dominant force in global composite production.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR due to technological innovation and strong demand from aerospace and defense industries. The region hosts leading composite manufacturers and research institutions focused on material science and automation. Government support for renewable energy projects further fuels the growth. The presence of major aircraft OEMs and automotive giants accelerates adoption of advanced composites. As industries prioritize lightweight, high-performance materials, North America's innovation ecosystem will lead the market's expansion trajectory.

Key players in the market

Some of the key players in Advanced Composites Market include Toray Industries, Inc., Teijin Limited, Hexcel Corporation, Owens Corning, SGL Carbon, Mitsubishi Chemical Group Corporation, Solvay S.A., Huntsman Corporation, DuPont de Nemours, Inc., Gurit Holding AG, PPG Industries, Inc., Kolon Industries Inc., China Jushi Co., Ltd. (Jushi Group), Hexion Inc. and Compagnie de Saint-Gobain S.A.

Key Developments:

In August 2025, Mitsubishi Chemical Corporation has entered into a coordination and cooperation agreement with Mie Prefecture and Yokkaichi City to maintain and develop the Yokkaichi Industrial Complex. The collaboration aims to transform the complex into a carbon-neutral hub by 2050. Initiatives include establishing a hydrogen and ammonia supply base, producing sustainable aviation fuel (SAF) and diesel from waste cooking oil, and advancing next-generation hydrogen mobility.

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In September 2024, Mitsubishi Corporation and ExxonMobil have signed a Project Framework Agreement to advance the world's largest low-carbon hydrogen project at ExxonMobil's Baytown facility in Texas. The project aims to produce up to 1 billion cubic feet of virtually carbon-free hydrogen daily and over 1 million tons of low-carbon ammonia annually.

Fiber Types Covered:

- Carbon Fiber Composites
- Glass Fiber Composites
- Aramid Fiber Composites
- Other Fiber Types

Resin Types Covered:

- Thermoset Composites
- Thermoplastic Composites

Manufacturing Processes Covered:

- Lay-Up Process
- Filament Winding Process
- Injection Molding Process
- Pultrusion Process
- Resin Transfer Molding (RTM)
- Compression Molding

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Other Manufacturing Processes

Applications Covered:

Aerospace & Defense

Automotive & Transportation

Wind Energy

Construction

Marine

Sporting Goods

Electrical & Electronics

Other Applications

End Users Covered:

Commercial Aviation

Industrial

Consumer Goods

Energy

Other End Users

Regions Covered:

North America

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- 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

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- 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 2024, 2025, 2026, 2028, and 2032
- 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

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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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Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

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