

Aerospace Composites Market Expected to Hit USD 99.5 Billion by 2035 Amid Rising Carbon Fiber Adoption

WILMINGTON, DE, UNITED STATES, September 29, 2025 /EINPresswire.com/ -- The global [Aerospace Composites Market](#) is projected to reach USD 99.5 billion by 2035, expanding at a CAGR of 11.8% from 2025 to 2035. Growth in the market is fueled by the rising adoption of lightweight composite materials in aircraft, helicopters, and spacecraft to enhance fuel efficiency, reduce emissions, and improve performance.

Composite materials such as carbon fiber reinforced polymers (CFRP), glass fiber composites, and aramid fiber composites are increasingly being deployed in aerospace applications due to their strength-to-weight ratio, fatigue resistance, and design flexibility. Leading aircraft manufacturers are integrating composites in fuselage structures, wings, tail sections, and interior components to optimize efficiency and meet sustainability goals.

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Key Players:

- Toray Industries Inc.
- Hexcel Corporation
- SGL-The Carbon Company
- Mitsubishi Chemical Holdings
- Teijin Limited
- Solvay
- Spirit AeroSystems
- Collins Aerospace
- Lee Aerospace
- Isovolta

Aerospace Composites Market

The global aerospace composites industry was valued at

US\$ 29.2 Bn
in 2024

estimated to expand at a **CAGR**

11.8% from 2026 to
and reach **US\$ 99.5 Bn**
by the end of 2035



Aerospace Composites Market



The market is expected to witness a CAGR of 11.8% from 2025 to 2035"

By Transparency Market Research

- PARK AEROSPACE CORP.
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The aerospace industry is undergoing a rapid transformation, with next-generation aircraft designs focusing on reduced operational costs and enhanced environmental sustainability. Composites have become a

cornerstone of modern aerospace engineering, providing a viable solution for weight reduction without compromising structural integrity.

According to recent industry studies, composites account for more than 50% of the structural weight in new-generation commercial aircraft such as Boeing 787 Dreamliner and Airbus A350. This trend is expected to strengthen as airlines and defense organizations prioritize fuel efficiency and operational reliability.

Moreover, the global push for decarbonization has accelerated research into advanced composites that support electric and hybrid aircraft development. Growing investments in Urban Air Mobility (UAM), drones, and space exploration programs are also creating new opportunities for aerospace composite manufacturers.

Key Market Drivers

Lightweight Advantage & Fuel Efficiency

Composite materials significantly reduce the overall weight of aircraft, contributing to 15-20% fuel savings.

Airlines benefit from reduced operating costs and compliance with stringent carbon emission regulations.

Rising Aircraft Deliveries

Increasing global passenger traffic is driving higher aircraft production. Airbus and Boeing have reported strong order backlogs, boosting composite demand.

Defense Sector Expansion

Military aircraft, helicopters, and UAVs are adopting composites for enhanced performance, stealth capabilities, and reduced maintenance requirements.

Sustainability & Emissions Control

International Civil Aviation Organization (ICAO) and other regulatory bodies are imposing strict CO₂ reduction targets, encouraging the adoption of advanced materials.

Growing Space Exploration Activities

Space agencies and private players are investing in lightweight, durable composite materials for satellites, launch vehicles, and spacecraft.

Market Challenges

High Material & Manufacturing Costs: Advanced composites are more expensive compared to conventional materials, which can limit adoption in cost-sensitive programs.

Complex Fabrication Processes: Manufacturing requires specialized equipment and expertise, leading to longer production cycles.

Repair & Recycling Limitations: Composites are challenging to repair and recycle, creating barriers to sustainable lifecycle management.

Market Trends

Automated Manufacturing Technologies such as Automated Fiber Placement (AFP) and 3D composite printing are reducing costs and improving scalability.

Nanocomposite Development is enhancing material strength, thermal resistance, and multifunctional capabilities.

Sustainable Bio-Composites are emerging as eco-friendly alternatives for aerospace interiors and secondary structures.

Integration in Electric Aircraft: Lightweight composites are critical for extending battery life and range in electric propulsion systems.

Regional Insights

North America leads the global aerospace composites market, driven by the presence of Boeing, Lockheed Martin, and SpaceX. High defense spending and strong adoption in commercial aviation sustain growth.

Europe is a key hub, with Airbus spearheading composite integration. EU sustainability policies are further boosting demand for lightweight materials.

Asia Pacific is expected to witness the fastest CAGR, fueled by increasing aircraft production in China, India, and Japan, alongside expanding defense budgets.

Middle East & Africa is growing steadily with rising aircraft fleet expansion and maintenance

operations.

Latin America shows moderate growth, supported by increasing commercial aviation traffic.

Future Outlook

The aerospace composites market is expected to remain on a strong growth trajectory over the next decade. The integration of composites in both traditional and emerging aerospace programs will continue to expand, supported by regulatory pressures and customer demand for greener, more efficient air travel.

As Urban Air Mobility (UAM) and electric aviation gain momentum, lightweight composites will play a crucial role in enabling safe, efficient, and sustainable flight. Furthermore, advances in nanotechnology, automation, and recycling will address cost and environmental concerns, unlocking wider adoption across the aerospace sector.

By 2035, aerospace composites will not only define the structural framework of modern aircraft but also pave the way for next-generation air mobility and space exploration initiatives.

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