

# Aviation Carbon Fiber Market Outlook 2025-2034: Market Share, and Growth Analysis By Type (Continuous, Long, Short), By Raw Material (Pan- Based Carbon Fiber, Pitch-Based Carbon Fiber), By End-Use

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## Abstracts

The Aviation Carbon Fiber Market is valued at USD 3.5 billion in 2025 and is projected to grow at a CAGR of 9.7% to reach USD 8 billion by 2034.

### Aviation Carbon Fiber Market Overview

The aviation carbon fiber market is experiencing significant expansion due to the aerospace industry's increasing demand for lightweight, durable, and fuel-efficient aircraft components. Carbon fiber composites offer superior strength-to-weight ratios, corrosion resistance, and fatigue durability compared to traditional materials, making them indispensable in modern aircraft design. The ongoing global emphasis on reducing carbon emissions and enhancing aircraft fuel efficiency is further accelerating the adoption of carbon fiber materials across commercial, military, and private aviation segments. The market saw substantial growth driven by aerospace manufacturers increasingly utilizing carbon fiber in new-generation aircraft programs, including narrow-body jets, wide-body airliners, and unmanned aerial vehicles (UAVs). Technological advancements, particularly in manufacturing processes such as automated fiber placement (AFP) and resin transfer molding (RTM), have significantly reduced production costs and enhanced manufacturing precision. Additionally, major collaborations between carbon fiber suppliers and aircraft OEMs intensified, further integrating advanced composites into structural and interior aircraft components. The aviation carbon fiber market is poised for sustained growth, driven by continued innovation in carbon composite materials, manufacturing technologies, and recycling

methods. Rising environmental regulations emphasizing fuel efficiency and reduced emissions will further support market expansion. Moreover, increased global defense spending and higher demand for UAVs and next-generation military aircraft are likely to create significant growth opportunities for carbon fiber suppliers and manufacturers in the coming years.

### Key Insights Aviation Carbon Fiber Market

Increasing application of carbon fiber in advanced structural components, such as wings, fuselages, and landing gears.

Technological innovations focused on cost-effective, automated manufacturing techniques like AFP and RTM.

Growing emphasis on sustainable carbon fiber recycling and circular economy practices within the aerospace industry.

Rising demand for thermoplastic carbon fiber composites due to their recyclability, durability, and ease of manufacturing.

Expansion of carbon fiber usage in emerging aerospace segments, such as electric aircraft and urban air mobility vehicles.

Increasing demand for fuel-efficient aircraft driven by stringent environmental regulations and rising fuel costs.

Significant weight reduction potential of carbon fiber composites enhancing aircraft payload capacity and range.

Rapid growth in commercial air travel and aircraft production globally, stimulating demand for advanced lightweight materials.

Expanding defense budgets and increased adoption of carbon fiber materials in military aviation applications.

High initial material and manufacturing costs limiting adoption in cost-sensitive aviation segments.

Technical challenges associated with recycling carbon fiber composites

efficiently and economically.

## Aviation Carbon Fiber Market Segmentation

### By Type

Continuous

Long

Short

### By Raw Material

Pan-Based Carbon Fiber

Pitch-Based Carbon Fiber

### By End-Use

Commercial Aircraft

Military Aircraft

### Key Companies Analysed

Toray Industries Inc.

Hexcel Corporation

Teijin Carbon Co. Ltd.

SGL Carbon SE

DuPont de Nemours Inc.

Solvay S.A.

BGF Industries Inc.

Taekwang Industrial Co. Ltd.

Weihai Tuozhan Fibers Co. Ltd.

Jiangsu Hengshen Co. Ltd.

Mitsubishi Chemical Corporation

BASF SE

Bally Ribbon Mills

Park Aerospace Technologies Corp.

Renegade Materials Corporation

Nippon Graphite Fiber Co. Ltd.

Zoltek Companies Inc.

Formosa Plastics Corporation

Hyosung Advanced Materials Corporation

Kureha Corporation

Zhongfu Shenying Carbon Fiber Co. Ltd.

Jiangsu Tianniao High Technology Co. Ltd.

Jilin Carbon Fiber Co. Ltd.

Weihai Guangwei Composites Co. Ltd.

Jushi Group Co. Ltd.

Hengshen Co. Ltd.

Jiangsu Hangke Composite Materials Technology Co. Ltd.

Jiangsu Jiuding New Material Co. Ltd.

Zhejiang Juxing Carbon Fiber Technology Co. Ltd.

Zhejiang Guanghua Technology Co. Ltd.

Zhejiang Mengtex Special Materials Technology Co. Ltd.

Zhejiang Weitong Composite Material Co. Ltd.

Zhejiang Hailong New Materials Co. Ltd.

Zhejiang Jinggong Science & Technology Co. Ltd.

Zhejiang Guxiandao High Technology Co. Ltd.

Anshan Sinocarb Carbon Fibers Co. Ltd.

DowAksa LLC

## Aviation Carbon Fiber Market Analytics

The report employs rigorous tools, including Porter's Five Forces, value chain mapping, and scenario-based modeling, to assess supply–demand dynamics. Cross-sector influences from parent, derived, and substitute markets are evaluated to identify risks and opportunities. Trade and pricing analytics provide an up-to-date view of international flows, including leading exporters, importers, and regional price trends.

Macroeconomic indicators, policy frameworks such as carbon pricing and energy security strategies, and evolving consumer behavior are considered in forecasting scenarios. Recent deal flows, partnerships, and technology innovations are incorporated to assess their impact on future market performance.

## Aviation Carbon Fiber Market Competitive Intelligence

The competitive landscape is mapped through OG Analysis' proprietary frameworks, profiling leading companies with details on business models, product portfolios, financial performance, and strategic initiatives. Key developments such as mergers & acquisitions, technology collaborations, investment inflows, and regional expansions are analyzed for their competitive impact. The report also identifies emerging players and innovative startups contributing to market disruption.

Regional insights highlight the most promising investment destinations, regulatory landscapes, and evolving partnerships across energy and industrial corridors.

### Countries Covered

North America — Aviation Carbon Fiber market data and outlook to 2034

United States

Canada

Mexico

Europe — Aviation Carbon Fiber market data and outlook to 2034

Germany

United Kingdom

France

Italy

Spain

BeNeLux

Russia

Sweden

Asia-Pacific — Aviation Carbon Fiber market data and outlook to 2034

China

Japan

India

South Korea

Australia

Indonesia

Malaysia

Vietnam

Middle East and Africa — Aviation Carbon Fiber market data and outlook to 2034

Saudi Arabia

South Africa

Iran

UAE

Egypt

South and Central America — Aviation Carbon Fiber market data and outlook to 2034

Brazil

Argentina

Chile

Peru

*\* We can include data and analysis of additional countries on demand.*

## Research Methodology

This study combines primary inputs from industry experts across the Aviation Carbon Fiber value chain with secondary data from associations, government publications, trade databases, and company disclosures. Proprietary modeling techniques, including data triangulation, statistical correlation, and scenario planning, are applied to deliver reliable market sizing and forecasting.

## Key Questions Addressed

What is the current and forecast market size of the Aviation Carbon Fiber industry at global, regional, and country levels?

Which types, applications, and technologies present the highest growth potential?

How are supply chains adapting to geopolitical and economic shocks?

What role do policy frameworks, trade flows, and sustainability targets play in shaping demand?

Who are the leading players, and how are their strategies evolving in the face of global uncertainty?

Which regional “hotspots” and customer segments will outpace the market, and what go-to-market and partnership models best support entry and expansion?

Where are the most investable opportunities—across technology roadmaps, sustainability-linked innovation, and M&A—and what is the best segment to invest over the next 3–5 years?

## Your Key Takeaways from the Aviation Carbon Fiber Market Report

Global Aviation Carbon Fiber market size and growth projections (CAGR), 2024-2034

Impact of Russia-Ukraine, Israel-Palestine, and Hamas conflicts on Aviation Carbon Fiber trade, costs, and supply chains

Aviation Carbon Fiber market size, share, and outlook across 5 regions and 27 countries, 2023-2034

Aviation Carbon Fiber market size, CAGR, and market share of key products, applications, and end-user verticals, 2023-2034

Short- and long-term Aviation Carbon Fiber market trends, drivers, restraints, and opportunities

Porter's Five Forces analysis, technological developments, and Aviation Carbon Fiber supply chain analysis

Aviation Carbon Fiber trade analysis, Aviation Carbon Fiber market price analysis, and Aviation Carbon Fiber supply/demand dynamics

Profiles of 5 leading companies—overview, key strategies, financials, and products

Latest Aviation Carbon Fiber market news and developments

## Additional Support

With the purchase of this report, you will receive

An updated PDF report and an MS Excel data workbook containing all market tables and figures for easy analysis.

7-day post-sale analyst support for clarifications and in-scope supplementary data, ensuring the deliverable aligns precisely with your requirements.

Complimentary report update to incorporate the latest available data and the impact of recent market developments.

*\* The updated report will be delivered within 3 working days*

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