

Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market Forecasts to 2034 – Global Analysis By Fiber Type (PAN-Based Carbon Fiber, Pitch-Based Carbon Fiber, Recycled Carbon Fiber and Other Fiber Types), Resin Type, Manufacturing Process, Property, Application and By Geography

<https://marketpublishers.com/r/A701BA2839DEEN.html>

Date: April 2026

Pages: 200

Price: US\$ 4,150.00 (Single User License)

ID: A701BA2839DEEN

Abstracts

According to Statistics MRC, the Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market is accounted for \$22.60 billion in 2026 and is expected to reach \$45.23 billion by 2034 growing at a CAGR of 9.1% during the forecast period. Aerospace Carbon Fiber Reinforced Polymers (CFRP) are lightweight composite materials made of carbon fibers embedded in a polymer matrix. They provide high strength-to-weight ratios, corrosion resistance, and excellent fatigue performance. CFRPs are widely used in aircraft structures such as fuselages, wings, and tail sections. Their use significantly reduces aircraft weight, improving fuel efficiency and performance. Advancements in manufacturing techniques and cost reduction are driving increased adoption, making CFRP a key material in modern aerospace design and next-generation aircraft production.

Market Dynamics:

Driver:

Increasing demand for lightweight aircraft

Carbon fiber reinforced polymers offer exceptional strength while significantly reducing overall aircraft weight. This weight reduction improves fuel efficiency, lowers emissions,

and enhances performance. Both commercial and defense aviation sectors are increasingly adopting CFRPs for fuselage, wings, and interior structures. The push toward sustainable aviation further amplifies the need for lightweight materials. As efficiency becomes a priority, CFRPs remain central to modern aerospace design.

Restraint:

Complex repair and maintenance processes

Unlike metals, CFRPs require specialized techniques and equipment for inspection and repair. Damage detection is often difficult, increasing operational costs for airlines. Smaller aerospace firms struggle to manage these complexities due to limited resources. Maintenance delays can impact fleet availability and profitability. Despite strong demand, repair challenges continue to limit broader adoption.

Opportunity:

Growing use in commercial aircraft structures

Airlines are modernizing fleets with advanced materials to improve efficiency and reduce operating costs. CFRPs are increasingly used in fuselage panels, wings, and tail sections. Their durability and corrosion resistance make them ideal for long-term use. Partnerships between aerospace firms and composite manufacturers are accelerating innovation. As commercial aviation expands globally, CFRPs are expected to see significant adoption.

Threat:

Recycling challenges of composite materials

The complex chemical composition of CFRPs makes them difficult to recycle compared to metals. Environmental regulations are pressuring manufacturers to develop sustainable disposal methods. High recycling costs increase lifecycle expenses for enterprises. Limited recycling infrastructure further complicates adoption. This threat underscores the importance of innovation in sustainable composite solutions.

Covid-19 Impact:

The COVID-19 pandemic had a mixed impact on the aerospace CFRP market. Supply

chain disruptions and workforce limitations slowed production and delayed projects. However, recovery in commercial aviation and defense spending boosted demand for advanced composites. Enterprises accelerated innovation to meet post-pandemic sustainability goals. Space exploration initiatives continued to drive CFRP development despite short-term challenges. Overall, COVID-19 created temporary setbacks but reinforced long-term momentum for aerospace CFRPs.

The epoxy resins segment is expected to be the largest during the forecast period

The epoxy resins segment is expected to account for the largest market share during the forecast period as they are widely used in aircraft structures due to their excellent bonding strength and durability. Epoxy resins provide superior adhesion and resistance to environmental stress. Aerospace firms rely on epoxy-based CFRPs for fuselage, wings, and interior applications. Continuous innovation in resin formulations strengthens adoption. Commercial aviation prioritizes epoxy resins for cost-effective manufacturing. With broad applicability, epoxy resins are expected to dominate the market.

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

Over the forecast period, the UAV structures segment is predicted to witness the highest growth rate due to increasing demand for lightweight and durable materials in unmanned aerial vehicles. CFRPs provide strength and flexibility while reducing weight, enhancing UAV performance. Defense and commercial sectors are investing heavily in UAV development. Advances in composite manufacturing are accelerating adoption in UAV structures. Partnerships between aerospace firms and composite producers are driving innovation. This positions UAV structures as the fastest-growing segment in the market.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share owing to established manufacturers, and high defense spending. The U.S. leads with major players investing in CFRP development for commercial and military aircraft. Robust demand for lightweight materials strengthens regional leadership. Government-backed initiatives in space exploration further accelerate adoption. Partnerships between aerospace firms and composite producers drive innovation. North America's dominance is expected to persist throughout the forecast period.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR driven by rising defense budgets, and growing investments in commercial aviation. Countries such as China, India, and Japan are advancing large-scale aerospace projects. Regional startups are entering the market with innovative CFRP solutions. Expanding demand for commercial aircraft fuels adoption of advanced composites. Government-backed programs supporting aerospace innovation further strengthen growth.

Key players in the market

Some of the key players in Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market include Toray Industries, Hexcel Corporation, SGL Carbon, Teijin Limited, Solvay S.A., Mitsubishi Chemical Group, Hexcel Composites, Cytec Industries, Gurit Holding, Huntsman Corporation, Arkema S.A., Axiom Materials, Formosa Plastics, Zoltek Corporation, DowAksa and Nippon Graphite Fiber.

Key Developments:

In December 2025, Nippon Graphite Fiber Corporation exhibited at the SAMPE JAPAN Exhibition 2025, showcasing its GRANOC pitch-based carbon fibers for satellite, aerospace, industrial, and thermal management applications.

In June 2025, Hexcel Composites, a division of Hexcel Corporation, signed a long-term partnership with Kongsberg Defence & Aerospace to supply HexWeb honeycombs and HexPly prepregs for strategic production programs over a five-year period.

Fiber Types Covered:

PAN-Based Carbon Fiber

Pitch-Based Carbon Fiber

Recycled Carbon Fiber

Other Fiber Types

Resin Types Covered:

Epoxy Resins

Polyester Resins

Vinyl Ester Resins

Thermoplastic Resins

Other Resin Types

Manufacturing Processes Covered:

Hand Lay-Up

Automated Fiber Placement (AFP)

Resin Transfer Molding (RTM)

Filament Winding

Compression Molding

Other Manufacturing Processes

Properties Covered:

High Strength-to-Weight Ratio

Fatigue Resistance

Corrosion Resistance

Thermal Stability

Impact Resistance

Other Properties

Applications Covered:

Fuselage & Wings

Interior Components

Engine Components

Spacecraft Structures

UAV Structures

Other Applications

Regions Covered:

North America

United States

Canada

Mexico

Europe

United Kingdom

Germany

France

Italy

Spain

Netherlands

Belgium

Sweden

Switzerland

Poland

Rest of Europe

Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of Africa

What our report offers:

Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market Forecasts to 2034 – Global Analysis By Fiber Type (PA...

Market share assessments for the regional and country-level segments

Strategic recommendations for the new entrants

Covers Market data for the years 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034

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

Contents

1 EXECUTIVE SUMMARY

- 1.1 Market Snapshot and Key Highlights
- 1.2 Growth Drivers, Challenges, and Opportunities
- 1.3 Competitive Landscape Overview
- 1.4 Strategic Insights and Recommendations

2 RESEARCH FRAMEWORK

- 2.1 Study Objectives and Scope
- 2.2 Stakeholder Analysis
- 2.3 Research Assumptions and Limitations
- 2.4 Research Methodology
 - 2.4.1 Data Collection (Primary and Secondary)
 - 2.4.2 Data Modeling and Estimation Techniques
 - 2.4.3 Data Validation and Triangulation
 - 2.4.4 Analytical and Forecasting Approach

3 MARKET DYNAMICS AND TREND ANALYSIS

- 3.1 Market Definition and Structure
- 3.2 Key Market Drivers
- 3.3 Market Restraints and Challenges
- 3.4 Growth Opportunities and Investment Hotspots
- 3.5 Industry Threats and Risk Assessment
- 3.6 Technology and Innovation Landscape
- 3.7 Emerging and High-Growth Markets
- 3.8 Regulatory and Policy Environment
- 3.9 Impact of COVID-19 and Recovery Outlook

4 COMPETITIVE AND STRATEGIC ASSESSMENT

- 4.1 Porter's Five Forces Analysis
 - 4.1.1 Supplier Bargaining Power
 - 4.1.2 Buyer Bargaining Power
 - 4.1.3 Threat of Substitutes
 - 4.1.4 Threat of New Entrants

- 4.1.5 Competitive Rivalry
- 4.2 Market Share Analysis of Key Players
- 4.3 Product Benchmarking and Performance Comparison

5 GLOBAL AEROSPACE CARBON FIBER REINFORCED POLYMERS (CFRP) MARKET, BY FIBER TYPE

- 5.1 PAN-Based Carbon Fiber
- 5.2 Pitch-Based Carbon Fiber
- 5.3 Recycled Carbon Fiber
- 5.4 Other Fiber Types

6 GLOBAL AEROSPACE CARBON FIBER REINFORCED POLYMERS (CFRP) MARKET, BY RESIN TYPE

- 6.1 Epoxy Resins
- 6.2 Polyester Resins
- 6.3 Vinyl Ester Resins
- 6.4 Thermoplastic Resins
- 6.5 Other Resin Types

7 GLOBAL AEROSPACE CARBON FIBER REINFORCED POLYMERS (CFRP) MARKET, BY MANUFACTURING PROCESS

- 7.1 Hand Lay-Up
- 7.2 Automated Fiber Placement (AFP)
- 7.3 Resin Transfer Molding (RTM)
- 7.4 Filament Winding
- 7.5 Compression Molding
- 7.6 Other Manufacturing Processes

8 GLOBAL AEROSPACE CARBON FIBER REINFORCED POLYMERS (CFRP) MARKET, BY PROPERTY

- 8.1 High Strength-to-Weight Ratio
- 8.2 Fatigue Resistance
- 8.3 Corrosion Resistance
- 8.4 Thermal Stability
- 8.5 Impact Resistance

8.6 Other Properties

9 GLOBAL AEROSPACE CARBON FIBER REINFORCED POLYMERS (CFRP) MARKET, BY APPLICATION

9.1 Fuselage & Wings

9.2 Interior Components

9.3 Engine Components

9.4 Spacecraft Structures

9.5 UAV Structures

9.6 Other Applications

10 GLOBAL AEROSPACE CARBON FIBER REINFORCED POLYMERS (CFRP) MARKET, BY GEOGRAPHY

10.1 North America

10.1.1 United States

10.1.2 Canada

10.1.3 Mexico

10.2 Europe

10.2.1 United Kingdom

10.2.2 Germany

10.2.3 France

10.2.4 Italy

10.2.5 Spain

10.2.6 Netherlands

10.2.7 Belgium

10.2.8 Sweden

10.2.9 Switzerland

10.2.10 Poland

10.2.11 Rest of Europe

10.3 Asia Pacific

10.3.1 China

10.3.2 Japan

10.3.3 India

10.3.4 South Korea

10.3.5 Australia

10.3.6 Indonesia

10.3.7 Thailand

- 10.3.8 Malaysia
- 10.3.9 Singapore
- 10.3.10 Vietnam
- 10.3.11 Rest of Asia Pacific
- 10.4 South America
 - 10.4.1 Brazil
 - 10.4.2 Argentina
 - 10.4.3 Colombia
 - 10.4.4 Chile
 - 10.4.5 Peru
 - 10.4.6 Rest of South America
- 10.5 Rest of the World (RoW)
 - 10.5.1 Middle East
 - 10.5.1.1 Saudi Arabia
 - 10.5.1.2 United Arab Emirates
 - 10.5.1.3 Qatar
 - 10.5.1.4 Israel
 - 10.5.1.5 Rest of Middle East
 - 10.5.2 Africa
 - 10.5.2.1 South Africa
 - 10.5.2.2 Egypt
 - 10.5.2.3 Morocco
 - 10.5.2.4 Rest of Africa

11 STRATEGIC MARKET INTELLIGENCE

- 11.1 Industry Value Network and Supply Chain Assessment
- 11.2 White-Space and Opportunity Mapping
- 11.3 Product Evolution and Market Life Cycle Analysis
- 11.4 Channel, Distributor, and Go-to-Market Assessment

12 INDUSTRY DEVELOPMENTS AND STRATEGIC INITIATIVES

- 12.1 Mergers and Acquisitions
- 12.2 Partnerships, Alliances, and Joint Ventures
- 12.3 New Product Launches and Certifications
- 12.4 Capacity Expansion and Investments
- 12.5 Other Strategic Initiatives

13 COMPANY PROFILES

- 13.1 Toray Industries
- 13.2 Hexcel Corporation
- 13.3 SGL Carbon
- 13.4 Teijin Limited
- 13.5 Solvay S.A.
- 13.6 Mitsubishi Chemical Group
- 13.7 Hexcel Composites
- 13.8 Cytec Industries
- 13.9 Gurit Holding
- 13.10 Huntsman Corporation
- 13.11 Arkema S.A.
- 13.12 Axiom Materials
- 13.13 Formosa Plastics
- 13.14 Zoltek Corporation
- 13.15 DowAksa
- 13.16 Nippon Graphite Fiber

List Of Tables

LIST OF TABLES

- Table 1 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market Outlook, By Region (2023-2034) (\$MN)
- Table 2 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Fiber Type (2023–2034) (\$MN)
- Table 3 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By PAN-Based Carbon Fiber (2023–2034) (\$MN)
- Table 4 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Pitch-Based Carbon Fiber (2023–2034) (\$MN)
- Table 5 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Recycled Carbon Fiber (2023–2034) (\$MN)
- Table 6 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Other Fiber Types (2023–2034) (\$MN)
- Table 7 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Resin Type (2023–2034) (\$MN)
- Table 8 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Epoxy Resins (2023–2034) (\$MN)
- Table 9 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Polyester Resins (2023–2034) (\$MN)
- Table 10 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Vinyl Ester Resins (2023–2034) (\$MN)
- Table 11 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Thermoplastic Resins (2023–2034) (\$MN)
- Table 12 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Other Resin Types (2023–2034) (\$MN)
- Table 13 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Manufacturing Process (2023–2034) (\$MN)
- Table 14 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Hand Lay-Up (2023–2034) (\$MN)
- Table 15 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Automated Fiber Placement (AFP) (2023–2034) (\$MN)
- Table 16 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Resin Transfer Molding (RTM) (2023–2034) (\$MN)
- Table 17 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Filament Winding (2023–2034) (\$MN)
- Table 18 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By

Compression Molding (2023–2034) (\$MN)

Table 19 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Other Manufacturing Processes (2023–2034) (\$MN)

Table 20 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Property (2023–2034) (\$MN)

Table 21 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By High Strength-to-Weight Ratio (2023–2034) (\$MN)

Table 22 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Fatigue Resistance (2023–2034) (\$MN)

Table 23 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Corrosion Resistance (2023–2034) (\$MN)

Table 24 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Thermal Stability (2023–2034) (\$MN)

Table 25 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Impact Resistance (2023–2034) (\$MN)

Table 26 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Other Properties (2023–2034) (\$MN)

Table 27 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Application (2023–2034) (\$MN)

Table 28 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Fuselage & Wings (2023–2034) (\$MN)

Table 29 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Interior Components (2023–2034) (\$MN)

Table 30 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Engine Components (2023–2034) (\$MN)

Table 31 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Spacecraft Structures (2023–2034) (\$MN)

Table 32 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By UAV Structures (2023–2034) (\$MN)

Table 33 Global Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market, By Other Applications (2023–2034) (\$MN)

Note: Tables for North America, Europe, APAC, South America, and Rest of the World (RoW) are also represented in the same manner as above.

I would like to order

Product name: Aerospace Carbon Fiber Reinforced Polymers (CFRP) Market Forecasts to 2034 – Global Analysis By Fiber Type (PAN-Based Carbon Fiber, Pitch-Based Carbon Fiber, Recycled Carbon Fiber and Other Fiber Types), Resin Type, Manufacturing Process, Property, Application and By Geography

Product link: <https://marketpublishers.com/r/A701BA2839DEEN.html>

Price: US\$ 4,150.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/A701BA2839DEEN.html>