

Aerospace Materials Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Type (Structural and Non-structural), By Aircraft (General and Commercial, Military and Defense, and Space Vehicles), By Region & Competition, 2021-2031F

<https://marketpublishers.com/r/A4F0B52EA140EN.html>

Date: January 2026

Pages: 180

Price: US\$ 4,500.00 (Single User License)

ID: A4F0B52EA140EN

Abstracts

The Global Aerospace Materials Market is projected to expand significantly, rising from USD 44.81 Billion in 2025 to USD 73.71 Billion by 2031, reflecting a compound annual growth rate of 8.65%. This market comprises advanced performance materials, including titanium, aluminum alloys, superalloys, and composites, which are engineered to enhance the durability and aerodynamic efficiency of aircraft structures and engines. The primary momentum behind this growth is the increasing need for lightweight, fuel-efficient fleets to achieve sustainability goals, coupled with a strong recovery in commercial aviation that demands extensive fleet maintenance and expansion. As reported by the International Air Transport Association (IATA) in 2024, global passenger traffic rose by 10.4% year-over-year, creating immediate demand for new aircraft manufacturing and aftermarket components.

Despite this upward trajectory, the industry confronts substantial hurdles related to supply chain instability and the scarcity of essential raw materials. The complex logistics involved in sourcing premium metals and composite precursors are highly vulnerable to geopolitical tensions and production bottlenecks. Such disruptions often lead to prolonged lead times and rising procurement costs, which can severely restrict manufacturing capabilities and hinder the sector's ability to address the accumulating backlog of aircraft orders.

Market Driver

The escalation in global air passenger traffic and the subsequent expansion of commercial fleets serve as the main engines of growth for the aerospace materials industry. As airlines work to rebuild capacity and manage increased travel volumes, manufacturers are accelerating production rates, thereby boosting the consumption of carbon fiber composites, titanium, and aluminum alloys. According to Boeing's 'Commercial Market Outlook 2024 to 2043' released in July 2024, the aviation sector is expected to require approximately 44,000 new commercial aircraft over the coming two decades to satisfy this rising demand. This intense ordering cycle places unprecedented strain on suppliers to finalize long-term agreements and increase output, a pressure underscored by IATA's 2024 report indicating a record global backlog of 17,000 new aircraft that requires a continuous supply of raw materials to fulfill.

Simultaneously, growing global defense spending is reshaping the market landscape, specifically driving demand for materials capable of high performance and stealth. Rising geopolitical friction has prompted nations to upgrade their air forces with next-generation fighter jets and unmanned aerial systems, necessitating specialized composites and advanced superalloys that can endure extreme operating conditions. This strategic pivot is highlighted by significant financial commitments to military procurement; as detailed by the Stockholm International Peace Research Institute (SIPRI) in April 2024, total global military spending reached a historic peak of \$2,443 billion in 2023. Such increased fiscal investment guarantees consistent demand for specialized aerospace materials, acting as a crucial stabilizer against economic fluctuations in the commercial sector.

Market Challenge

Supply chain instability and the shortage of essential raw materials constitute a significant impediment to the growth of the Global Aerospace Materials Market. The intricate logistical networks required to obtain high-quality metals and composite precursors introduce vulnerabilities that frequently result in prolonged lead times and volatile procurement costs. These disruptions directly constrain the manufacturing capabilities of aircraft original equipment manufacturers, hindering the timely processing of raw materials into the finished structural components and engine parts necessary for fleet renewal.

Consequently, the failure to maintain a reliable stream of materials creates a growing disparity between confirmed orders and actual deliveries. This bottleneck limits revenue

generation for material suppliers, who find themselves unable to efficiently meet the rising volume of contracts. According to data from the ADS Group, the global aircraft order backlog climbed to a record 15,668 aircraft in the first half of 2024, emphasizing the severity of production limitations caused by these supply chain constraints. This accumulation of unfilled orders illustrates how material shortages effectively place a ceiling on market performance and retard industrial momentum, even amidst strong demand signals.

Market Trends

The expansion of additive manufacturing metal powder portfolios is fundamentally transforming the global aerospace materials supply chain by facilitating the creation of complex, lightweight engine components with minimal material waste. In contrast to traditional subtractive manufacturing, which often involves high buy-to-fly ratios, additive techniques enable suppliers to use specialized nickel superalloy and titanium powders to print parts on demand, thereby bypassing the extended lead times typical of conventional forgings. Major tier-one suppliers are aggressively adopting this shift to protect their production lines from raw material volatility and rising energy costs, exemplified by GKN Aerospace's January 2024 announcement of a \$50 million investment in Sweden to enhance additive fabrication infrastructure and reduce raw material usage by up to 80%.

Concurrently, the increasing adoption of Ceramic Matrix Composites (CMCs) in engine sections is establishing new standards for propulsion efficiency by allowing for higher operating temperatures than traditional metallic superalloys can sustain. Engine manufacturers are incorporating these silicon carbide-based materials into combustor liners and high-pressure turbine shrouds to reduce the requirement for cooling air, which directly enhances specific fuel consumption and thermal efficiency. This transition in materials is intrinsically tied to the commercial production ramp-up of next-generation engines that rely on CMCs to achieve strict environmental performance goals; highlighting this demand, GE Aerospace reported in October 2024 that total commercial engine and services orders rose by 29% year-over-year, propelled by the enduring backlog of LEAP engines utilizing these advanced technologies.

Key Market Players

3M Company

Acerinox, S.A.

Akzo Nobel NV

Aluminum Corporation of China Limited

Arkema SA

Advanced Technology International (ATI)

Axalta Coating Systems, LLC

BASF SE

Beacon Adhesives Inc.

CRS Holdings, LLC

Report Scope

In this report, the Global Aerospace Materials Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

Aerospace Materials Market, By Type

Structural and Non-structural

Aerospace Materials Market, By Aircraft

General and Commercial

Military and Defense

and Space Vehicles

Aerospace Materials Market, By Region

North America

United States

Canada

Mexico

Europe

France

United Kingdom

Italy

Germany

Spain

Asia Pacific

China

India

Japan

Australia

South Korea

South America

Brazil

Argentina

Colombia

Middle East & Africa

South Africa

Saudi Arabia

UAE

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the Global Aerospace Materials Market.

Available Customizations:

Global Aerospace Materials Market report with the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to five).

Contents

1. PRODUCT OVERVIEW

- 1.1. Market Definition
- 1.2. Scope of the Market
 - 1.2.1. Markets Covered
 - 1.2.2. Years Considered for Study
 - 1.2.3. Key Market Segmentations

2. RESEARCH METHODOLOGY

- 2.1. Objective of the Study
- 2.2. Baseline Methodology
- 2.3. Key Industry Partners
- 2.4. Major Association and Secondary Sources
- 2.5. Forecasting Methodology
- 2.6. Data Triangulation & Validation
- 2.7. Assumptions and Limitations

3. EXECUTIVE SUMMARY

- 3.1. Overview of the Market
- 3.2. Overview of Key Market Segmentations
- 3.3. Overview of Key Market Players
- 3.4. Overview of Key Regions/Countries
- 3.5. Overview of Market Drivers, Challenges, Trends

4. VOICE OF CUSTOMER

5. GLOBAL AEROSPACE MATERIALS MARKET OUTLOOK

- 5.1. Market Size & Forecast
 - 5.1.1. By Value
- 5.2. Market Share & Forecast
 - 5.2.1. By Type (Structural and Non-structural)
 - 5.2.2. By Aircraft (General and Commercial, Military and Defense, and Space Vehicles)
 - 5.2.3. By Region

- 5.2.4. By Company (2025)
- 5.3. Market Map

6. NORTH AMERICA AEROSPACE MATERIALS MARKET OUTLOOK

- 6.1. Market Size & Forecast
 - 6.1.1. By Value
- 6.2. Market Share & Forecast
 - 6.2.1. By Type
 - 6.2.2. By Aircraft
 - 6.2.3. By Country
- 6.3. North America: Country Analysis
 - 6.3.1. United States Aerospace Materials Market Outlook
 - 6.3.1.1. Market Size & Forecast
 - 6.3.1.1.1. By Value
 - 6.3.1.2. Market Share & Forecast
 - 6.3.1.2.1. By Type
 - 6.3.1.2.2. By Aircraft
 - 6.3.2. Canada Aerospace Materials Market Outlook
 - 6.3.2.1. Market Size & Forecast
 - 6.3.2.1.1. By Value
 - 6.3.2.2. Market Share & Forecast
 - 6.3.2.2.1. By Type
 - 6.3.2.2.2. By Aircraft
 - 6.3.3. Mexico Aerospace Materials Market Outlook
 - 6.3.3.1. Market Size & Forecast
 - 6.3.3.1.1. By Value
 - 6.3.3.2. Market Share & Forecast
 - 6.3.3.2.1. By Type
 - 6.3.3.2.2. By Aircraft

7. EUROPE AEROSPACE MATERIALS MARKET OUTLOOK

- 7.1. Market Size & Forecast
 - 7.1.1. By Value
- 7.2. Market Share & Forecast
 - 7.2.1. By Type
 - 7.2.2. By Aircraft
 - 7.2.3. By Country

7.3. Europe: Country Analysis

7.3.1. Germany Aerospace Materials Market Outlook

7.3.1.1. Market Size & Forecast

7.3.1.1.1. By Value

7.3.1.2. Market Share & Forecast

7.3.1.2.1. By Type

7.3.1.2.2. By Aircraft

7.3.2. France Aerospace Materials Market Outlook

7.3.2.1. Market Size & Forecast

7.3.2.1.1. By Value

7.3.2.2. Market Share & Forecast

7.3.2.2.1. By Type

7.3.2.2.2. By Aircraft

7.3.3. United Kingdom Aerospace Materials Market Outlook

7.3.3.1. Market Size & Forecast

7.3.3.1.1. By Value

7.3.3.2. Market Share & Forecast

7.3.3.2.1. By Type

7.3.3.2.2. By Aircraft

7.3.4. Italy Aerospace Materials Market Outlook

7.3.4.1. Market Size & Forecast

7.3.4.1.1. By Value

7.3.4.2. Market Share & Forecast

7.3.4.2.1. By Type

7.3.4.2.2. By Aircraft

7.3.5. Spain Aerospace Materials Market Outlook

7.3.5.1. Market Size & Forecast

7.3.5.1.1. By Value

7.3.5.2. Market Share & Forecast

7.3.5.2.1. By Type

7.3.5.2.2. By Aircraft

8. ASIA PACIFIC AEROSPACE MATERIALS MARKET OUTLOOK

8.1. Market Size & Forecast

8.1.1. By Value

8.2. Market Share & Forecast

8.2.1. By Type

8.2.2. By Aircraft

8.2.3. By Country

8.3. Asia Pacific: Country Analysis

8.3.1. China Aerospace Materials Market Outlook

8.3.1.1. Market Size & Forecast

8.3.1.1.1. By Value

8.3.1.2. Market Share & Forecast

8.3.1.2.1. By Type

8.3.1.2.2. By Aircraft

8.3.2. India Aerospace Materials Market Outlook

8.3.2.1. Market Size & Forecast

8.3.2.1.1. By Value

8.3.2.2. Market Share & Forecast

8.3.2.2.1. By Type

8.3.2.2.2. By Aircraft

8.3.3. Japan Aerospace Materials Market Outlook

8.3.3.1. Market Size & Forecast

8.3.3.1.1. By Value

8.3.3.2. Market Share & Forecast

8.3.3.2.1. By Type

8.3.3.2.2. By Aircraft

8.3.4. South Korea Aerospace Materials Market Outlook

8.3.4.1. Market Size & Forecast

8.3.4.1.1. By Value

8.3.4.2. Market Share & Forecast

8.3.4.2.1. By Type

8.3.4.2.2. By Aircraft

8.3.5. Australia Aerospace Materials Market Outlook

8.3.5.1. Market Size & Forecast

8.3.5.1.1. By Value

8.3.5.2. Market Share & Forecast

8.3.5.2.1. By Type

8.3.5.2.2. By Aircraft

9. MIDDLE EAST & AFRICA AEROSPACE MATERIALS MARKET OUTLOOK

9.1. Market Size & Forecast

9.1.1. By Value

9.2. Market Share & Forecast

9.2.1. By Type

- 9.2.2. By Aircraft
- 9.2.3. By Country
- 9.3. Middle East & Africa: Country Analysis
 - 9.3.1. Saudi Arabia Aerospace Materials Market Outlook
 - 9.3.1.1. Market Size & Forecast
 - 9.3.1.1.1. By Value
 - 9.3.1.2. Market Share & Forecast
 - 9.3.1.2.1. By Type
 - 9.3.1.2.2. By Aircraft
 - 9.3.2. UAE Aerospace Materials Market Outlook
 - 9.3.2.1. Market Size & Forecast
 - 9.3.2.1.1. By Value
 - 9.3.2.2. Market Share & Forecast
 - 9.3.2.2.1. By Type
 - 9.3.2.2.2. By Aircraft
 - 9.3.3. South Africa Aerospace Materials Market Outlook
 - 9.3.3.1. Market Size & Forecast
 - 9.3.3.1.1. By Value
 - 9.3.3.2. Market Share & Forecast
 - 9.3.3.2.1. By Type
 - 9.3.3.2.2. By Aircraft

10. SOUTH AMERICA AEROSPACE MATERIALS MARKET OUTLOOK

- 10.1. Market Size & Forecast
 - 10.1.1. By Value
- 10.2. Market Share & Forecast
 - 10.2.1. By Type
 - 10.2.2. By Aircraft
 - 10.2.3. By Country
- 10.3. South America: Country Analysis
 - 10.3.1. Brazil Aerospace Materials Market Outlook
 - 10.3.1.1. Market Size & Forecast
 - 10.3.1.1.1. By Value
 - 10.3.1.2. Market Share & Forecast
 - 10.3.1.2.1. By Type
 - 10.3.1.2.2. By Aircraft
 - 10.3.2. Colombia Aerospace Materials Market Outlook
 - 10.3.2.1. Market Size & Forecast

- 10.3.2.1.1. By Value
- 10.3.2.2. Market Share & Forecast
 - 10.3.2.2.1. By Type
 - 10.3.2.2.2. By Aircraft
- 10.3.3. Argentina Aerospace Materials Market Outlook
 - 10.3.3.1. Market Size & Forecast
 - 10.3.3.1.1. By Value
 - 10.3.3.2. Market Share & Forecast
 - 10.3.3.2.1. By Type
 - 10.3.3.2.2. By Aircraft

11. MARKET DYNAMICS

- 11.1. Drivers
- 11.2. Challenges

12. MARKET TRENDS & DEVELOPMENTS

- 12.1. Merger & Acquisition (If Any)
- 12.2. Product Launches (If Any)
- 12.3. Recent Developments

13. GLOBAL AEROSPACE MATERIALS MARKET: SWOT ANALYSIS

14. PORTER'S FIVE FORCES ANALYSIS

- 14.1. Competition in the Industry
- 14.2. Potential of New Entrants
- 14.3. Power of Suppliers
- 14.4. Power of Customers
- 14.5. Threat of Substitute Products

15. COMPETITIVE LANDSCAPE

- 15.1. 3M Company
 - 15.1.1. Business Overview
 - 15.1.2. Products & Services
 - 15.1.3. Recent Developments
 - 15.1.4. Key Personnel

- 15.1.5. SWOT Analysis
- 15.2. Acerinox, S.A.
- 15.3. Akzo Nobel NV
- 15.4. Aluminum Corporation of China Limited
- 15.5. Arkema SA
- 15.6. Advanced Technology International (ATI)
- 15.7. Axalta Coating Systems, LLC
- 15.8. BASF SE
- 15.9. Beacon Adhesives Inc.
- 15.10. CRS Holdings, LLC

16. STRATEGIC RECOMMENDATIONS

17. ABOUT US & DISCLAIMER

I would like to order

Product name: Aerospace Materials Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Type (Structural and Non-structural), By Aircraft (General and Commercial, Military and Defense, and Space Vehicles), By Region & Competition, 2021-2031F

Product link: <https://marketpublishers.com/r/A4F0B52EA140EN.html>

Price: US\$ 4,500.00 (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/A4F0B52EA140EN.html>