

## **Commercial Aircraft Materials Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)**

Market Report | 2023-01-23 | 92 pages | Mordor Intelligence

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### **Report description:**

The commercial aircraft materials market is expected to exhibit a growth rate of over 7% during the forecast period.

The aviation industry was greatly affected due to the impact of COVID-19, which led to a significant decrease in passenger traffic in 2020. This has led to a decrease in aircraft orders and a simultaneous decrease in production rates of commercial aircraft programs by the aircraft OEMs in 2020. However, the passenger traffic gradually began to recover in 2021, which led to the recovery of aircraft deliveries and orders compared to 2020.

The gradual recovery of passenger traffic and fleet modernization initiatives boost procurements of new aircraft. This factor propels the market growth for commercial aircraft and, subsequently, commercial aircraft materials.

The introduction of stringent aviation emission norms has led to the integration of new, lightweight materials (like composites and titanium) onboard the aircraft by the aircraft OEMs that will decrease the aircraft weight to enhance fuel efficiency. This factor is propelling the growth of the commercial aircraft materials market size.

Increasing the use of composite materials over metal alloys is expected to significantly drive the market in the future. Composites provide a high strength-to-weight ratio, high temperature, and fracture resistance over other materials, and this factor is fuelling the large-scale adoption of composites in commercial aircraft manufacturing.

Commercial Aircraft Materials Market Trends

Composites to Exhibit the Highest Growth Rate During the Forecast Period

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Commercial aircraft manufacturers are heavily focused on adopting new materials with high strength-to-weight ratios. Composite materials provide several advantages such as low weight, ease in shaping, handling, repairing, etc. Composites such as ceramic and metal matrix composites, fiber-reinforced polymers, carbon-carbon composites, etc., are used in aircraft manufacturing companies because of their favorable properties. Aircraft such as Boeing 787 and Airbus A350XWB are 50% and 53% composite materials by weight, respectively. Furthermore, with the increasing demand for composites, the companies are opening new facilities to develop advanced composites. For instance, in July 2021, Pratt & Whitney, a division of Raytheon Technologies Corp., announced the inauguration of a ceramic matrix composites (CMCs) engineering & development facility in Carlsbad, United States. The facility has an area of over 60,000 square feet. It will be used for developing, integrating engineering, and low-rate production of Ceramic Matrix Composites (CMCs) for aerospace applications. The growing popularity of the composites to decrease the weight and increase the fuel efficiency of the aircraft is anticipated to accelerate the segment's growth during the forecast period.

#### North America Accounted for a Major Market Share in 2021

The North American region currently dominates the market and is expected to continue its dominance over the market during the forecast period. This is primarily due to the huge order book of airlines operating in the United States and Canada as a part of their fleet modernization programs. The region's passenger traffic is gradually recovering from the impact of the pandemic and is expected to recover to pre-pandemic levels by 2023. This increasing passenger traffic allows the airlines to invest in new generation fuel-efficient aircraft. For instance, in June 2021, United Airlines ordered a mix of 270 narrow-body aircraft from Airbus and Boeing. The order includes 200 Boeing 737 MAX and 70 Airbus A321neo aircraft, worth more than USD 30 billion, to increase their domestic capacity by approximately 30%. Similarly, as a part of restructuring the aircraft fleet, in November 2021, Air Canada signed an agreement for the delivery of four Boeing 737 MAX aircraft by the end of 2021 and nine Boeing 737 MAX aircraft by the end of the second quarter of 2022. With the delivery of these 13 aircraft, the airline's Boeing 737 MAX aircraft fleet will increase to 40. Such orders for new aircraft by major airlines in the region are expected to boost the demand for aircraft materials in the coming years.

#### Commercial Aircraft Materials Market Competitor Analysis

The commercial aircraft materials market is highly fragmented due to various players providing adhesives, chemicals, composites, metals and non-metal materials, plastics, etc. Some of the prominent players in the market are Solvay, Toray Industries, Inc., Constellium, DuPont, and AMG Advanced Metallurgical Group NV, among others. Solvay is the major provider of composites to major aircraft programs like Airbus A220, Boeing 737, Boeing 777, Boeing 787 Dreamliner, COMAC C919, and Airbus A350. In addition to the aforementioned players, companies like General Plastics Manufacturing Company, Inc. and Alcoa Corporation provide plastic materials and metal. Alcoa Corporation provides metal and alloy products for Airbus A320, Airbus A330, Airbus A350, Boeing 737 MAX, Boeing 787 Dreamliner, and COMAC C919 aircraft programs. The market is witnessing increased collaborations, acquisitions, and innovations in material technology, supporting the market growth. For instance, in September 2021, Hexcel Corp was awarded a multi-year contract to manufacture aerospace structures made with HexPEKK-100 material for the Boeing 777X. Under the agreement, the HexPEKK parts will be manufactured at Hexcel's additive manufacturing site near Hartford for airflow ducting applications and other supporting elements on the aircraft. Such partnerships with aircraft OEMs are expected to propel the company's growth in the coming years.

#### Additional Benefits:

The market estimate (ME) sheet in Excel format  
3 months of analyst support

#### Table of Contents:

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## 1 INTRODUCTION

### 1.1 Study Assumptions and Market Definition

### 1.2 Scope of the Study

## 2 RESEARCH METHODOLOGY

## 3 EXECUTIVE SUMMARY

## 4 MARKET DYNAMICS

### 4.1 Market Overview

### 4.2 Market Drivers

### 4.3 Market Restraints

### 4.4 Porter's Five Forces Analysis

#### 4.4.1 Threat of New Entrants

#### 4.4.2 Bargaining Power of Buyers/Consumers

#### 4.4.3 Bargaining Power of Suppliers

#### 4.4.4 Threat of Substitute Products

#### 4.4.5 Intensity of Competitive Rivalry

## 5 MARKET SEGMENTATION (Market Size and Forecast by Value - USD million, 2018 - 2027)

### 5.1 Aircraft Type

#### 5.1.1 Narrow-Body Aircraft

#### 5.1.2 Wide-Body Aircraft

#### 5.1.3 Regional Aircraft

### 5.2 Material

#### 5.2.1 Composites

#### 5.2.2 Aluminum Alloys

#### 5.2.3 Steel

#### 5.2.4 Other Materials

### 5.3 Geography

#### 5.3.1 North America

##### 5.3.1.1 United States

##### 5.3.1.2 Canada

#### 5.3.2 Europe

##### 5.3.2.1 Germany

##### 5.3.2.2 United Kingdom

##### 5.3.2.3 France

##### 5.3.2.4 Russia

##### 5.3.2.5 Rest of Europe

#### 5.3.3 Asia-Pacific

##### 5.3.3.1 China

##### 5.3.3.2 Japan

##### 5.3.3.3 India

##### 5.3.3.4 South Korea

##### 5.3.3.5 Rest of Asia-Pacific

#### 5.3.4 Latin America

##### 5.3.4.1 Brazil

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- 5.3.4.2 Rest of Latin America
- 5.3.5 Middle-East
  - 5.3.5.1 United Arab Emirates
  - 5.3.5.2 Saudi Arabia
  - 5.3.5.3 Egypt
  - 5.3.5.4 Rest of Middle-East

## 6 COMPETITIVE LANDSCAPE

- 6.1 Vendor Market Share
- 6.2 Company Profiles
  - 6.2.1 Solvay
  - 6.2.2 Hexcel Corporation
  - 6.2.3 Toray Industries Inc.
  - 6.2.4 Constellium
  - 6.2.5 DuPont de Nemours Inc.
  - 6.2.6 Arconic Inc.
  - 6.2.7 Allegheny Technologies Incorporated (ATI)
  - 6.2.8 AMG Advanced Metallurgical Group NV
  - 6.2.9 Novelis Deutschland GmbH
  - 6.2.10 Notus Composites
  - 6.2.11 VSMPO-AVISMA Corporation

## 7 MARKET OPPORTUNITIES AND FUTURE TRENDS

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