

# Global Demand for Advanced Composite Materials Continues to Surge with Strong Growth in Aerospace & Wind Energy Sectors

*The market for advanced composite materials is expanding because more industries, like aerospace, automotive, wind energy, and building, need materials*

VANCOUVER, BC, CANADA, March 26, 2025 /EINPresswire.com/ -- An Emergen Research report of 250 pages features 194 tables, 189 charts, and graphics. Our new study is ideal for anyone who wants to learn about the global [Advanced Composite Materials market](#) commercially and deeply, as

well as to analyze the market segments in depth. With the help of our recent study, you can analyze the entire regional and global market for Advanced Composite Materials. To increase market share, you must obtain financial analysis of the entire market and its segments. Our research suggests there are significant opportunities in this rapidly expanding market for energy storage technology.

The Advanced Composite Materials market is expected to grow from an estimated USD 38.1 billion in 2024 to USD 87.7 billion in 2033, at a CAGR of 9.7%. The global market for advanced composite materials is experiencing rapid growth, driven by increased demand from the aerospace, defense, automotive, and wind energy industries. As more people travel by air and the construction of wind energy facilities expands worldwide, the need for lightweight and high-strength materials is growing significantly. The International Air Transport Association (IATA) reported that commercial aircraft revenue reached USD 727 billion in 2022, a 43.6% increase from 2021, with projections to hit USD 779 billion by the end of 2023. This trend is expected to fuel demand for advanced composite materials in aircraft manufacturing.

Advanced composites, such as carbon fiber-reinforced polymers (CFRPs), are widely used in aerospace and automotive sectors to improve structural strength while reducing weight and enhancing fuel efficiency. Additionally, government regulations aimed at reducing carbon



emissions and the rising adoption of electric vehicles have further accelerated the demand for lightweight composite materials, which improve vehicle performance and battery efficiency. In the renewable energy sector, advanced composites are essential for manufacturing longer and more efficient wind turbine blades, contributing to the market's steady expansion.

Innovations in materials science and manufacturing processes are also playing a key role in the growth of the advanced composites market. Technologies such as automated fiber placement, 3D printing, and the development of recyclable composites are reducing production costs and expanding the range of applications. The durability and corrosion resistance of composites have made them increasingly popular in construction projects, including buildings and bridges, creating new growth opportunities in the infrastructure sector. As industries prioritize sustainability, energy efficiency, and performance, the demand for advanced composites is expected to rise further.

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Major Players/Manufacturers profiled in the report are:

Toray Industries Inc.

Koninklijke Ten Cate NV

Teijin Limited

Hexcel Corporation

SGL Group

Cytec Solvay Group

Owens Corning

E.I. Dupont De Nemours and Company

Huntsman Corporation

Momentive Performance Materials Inc.

WS Atkins PLC

AGY Holdings Corp.

## Market Growth Driven by Aerospace and Automotive Sectors

The aerospace industry remains a major consumer of advanced composite materials. Commercial aircraft manufacturers increasingly rely on composites to reduce aircraft weight and improve fuel efficiency. Boeing, one of the world's largest aircraft manufacturers, delivered 480 planes in 2022, a 41% increase from 2021. Airbus also delivered 661 commercial aircraft in 2022 and received 1,078 net new orders by the end of the year. With rising aircraft production, the demand for advanced composites is projected to increase significantly in the coming years.

Similarly, the automotive industry is driving market growth as manufacturers seek lightweight materials to enhance fuel efficiency and meet stringent environmental regulations. As electric vehicle production expands, the need for advanced composites to improve battery performance and vehicle range is growing rapidly. These trends position advanced composite materials as essential components in the future of transportation.

## Challenges Due to High Production Costs

Despite strong market growth, high initial costs remain a major challenge for the widespread adoption of advanced composites. The production of carbon fiber-reinforced plastics (CFRPs) and other high-performance composites requires expensive raw materials, specialized equipment, and complex manufacturing processes. Energy-intensive carbon fiber production and labor-intensive composite fabrication methods, such as hand lay-up and autoclave curing, contribute to high costs. As a result, small and medium-sized manufacturers, as well as budget-conscious industries such as construction, often opt for traditional materials like steel and aluminum.

The high upfront cost also affects the cost-benefit analysis for potential applications. While advanced composites offer long-term benefits such as durability, lightweight properties, and low maintenance, their initial expense can deter widespread use in cost-sensitive industries. To address this challenge, ongoing research and development efforts are focused on improving production efficiency, identifying cost-effective raw materials, and expanding manufacturing capacity for advanced composites.

## Segment Insights: Carbon Fiber Leads, Glass Composites See Fastest Growth

The advanced composite materials market is segmented by product type into aramid fiber, carbon fiber, and glass fiber. In 2023, carbon fiber composites led the market due to their superior strength and lightweight properties, making them a preferred choice for aerospace,

automotive, and sports equipment industries. Additionally, the demand for heat and pressure-resistant composites in pipes and tanks is contributing to market growth.

Meanwhile, glass fiber composites are expected to register the fastest growth rate. Their key advantages include dimensional stability, moisture resistance, fire resistance, and strong electrical insulation properties. Glass fiber composites are widely used in electrical insulation, manufacturing, marine engineering, and various industrial applications. The material's ability to be drawn into high-strength fibers and its cost-effectiveness make it an attractive choice for multiple industries.

As industries continue to prioritize sustainability, efficiency, and performance, the demand for advanced composite materials is set to rise. With technological advancements and expanding applications, the market is expected to witness substantial growth in the coming years.

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Global Advanced Composite Materials Market Report - Segmental Analysis:

By Product Outlook (Revenue, USD Million; 2020-2033)

Aramid Fiber

Carbon Fiber

Glass Fiber

By Resin Type Outlook (Revenue, USD Million; 2020-2033)

Advanced Thermosetting Composites

Advanced Thermoplastic Composites

By Application Outlook (Revenue, USD Million; 2020-2033)

Aerospace & Defense

Automotive

Wind Energy

Sporting Goods

Others

Key Geographies Profiled in the Report:

North America(the U.S., Mexico, and Canada)

Asia Pacific(China, Japan, India, and Rest of Asia Pacific)

Europe(the U.K., France, Germany, and Rest of Europe)

Latin America(Brazil and Rest of Latin America)

Middle East & Africa(GCC Countries and Rest of Middle East & Africa)

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A detailed analysis of the factors that drive and restrict the growth of the minimally invasive surgical systems market is provided.

Extensive analysis of key segments demonstrates the types of energy devices, access equipment, and visualization & documentation systems used in minimally invasive surgeries.

A comprehensive analysis of the geographical landscape provides detailed information about various regions across North America, Europe, Asia Pacific, Latin America, and Middle East & Africa.

The report offers a competitive landscape of the minimally invasive surgical systems market to assist players to gain insights into the competition scenario. Key companies operating in the market are profiled to provide valuable insights.

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