

Global Carbon Fibers Market Outlook to 2027

<https://marketpublishers.com/r/G910F3BD4FF5EN.html>

Date: January 2022

Pages: 169

Price: US\$ 4,490.00 (Single User License)

ID: G910F3BD4FF5EN

Abstracts

Carbon Fibers or Graphite Fibers are fibers about 5–10 micrometers in diameter and composed mainly of carbon atoms, a strong, stiff, lightweight material that can replace steel and is popularly used in specialized, high-performance products. According to BlueQuark Research & Consulting, the global Carbon Fiber market is expected to witness a significant growth rate during the forecasted period. Factors like the growing use of Carbon Fibers in the Aerospace industry to reduce the aircraft's overall weight, hence giving better fuel efficiency, are expected to drive the Global Carbon Fiber Market. Further, the usage of Carbon Fibers in the Automobile industry to produce a reduction in weight, part integration and reduction, crashworthiness, durability, toughness, and aesthetic appealing is projected to drive the Global Carbon Fibers Market. Furthermore, the use of carbon fibers for making windmill blades used to harness wind electricity, due to its lightweight properties reducing overall weight by nearly 25%, is expected to drive the Global Market. Carbon fibers are also employed in the sports industry, where they are preferred for producing equipment like sticks and rackets due to advanced properties such as lightweight and high strength to weight ratio. However, factors like the fluctuating raw material prices and the exorbitant price of carbon fibers both in terms of production and usage are expected to hinder the Global Carbon Fiber market growth.

Carbon Fiber has found varied applications across industries due to its advanced properties, primarily due to it being strong, stiff, and lightweight, proving to be a metal alternative. Some of its applications include uses in the aerospace, road, and marine transport, sporting goods, Missiles, aircraft brakes, aerospace antenna and support structure, large telescopes, optical benches, Audio equipment, loudspeakers for Hi-fi equipment, pickup arms, robot arms, Automobile hoods, novel tooling, casings and bases for electronic equipment, EMI and RF shielding, brushes, among others.

The Aerospace Industry is the primary consumer of carbon fibers where their use is

projected to drive the Global Market. Advanced physical and mechanical properties such as being lightweight, having tensile strength, high impact resistance, being fuel-efficient, and reliability as a metal alternative have made Carbon Fibers a critical material used in essential components. Further, strict environmental norms being laid down by countries and agencies have made it all the more necessary for airplane builders to build lightweight and fuel-efficient airplanes, driving the global carbon fibers market. Furthermore, Carbon Fiber-reinforced plastic, or CFRP, is broadly used in modern-day airplanes, including the Airbus A350 XWB, whose wing comprises the lightweight carbon composites, CFRP. Airplane manufacturers mainly use Carbon Fibers because they are lighter than aluminum, more potent than iron, and more corrosion-resistant than both, thus making their way to mission-critical components like wings, fuselage, and cockpits and tail, etc. With a narrow body and long-range aircraft like Airbus A350 XWB, A320 Neo, Boeing 787, Boeing 737 gaining prominence and airlines buying them due to better operational costs and enhanced profitability, the global demand for Carbon Fibers is projected to grow. Rising oil prices, global warming, and increased awareness have led to countries shifting towards lighter and efficient aircraft. Thus all the factors have added to the growth of the worldwide Carbon Fiber market.

Some of the market's key players are The 3M Company, Toray Industries, Inc., SABIC, BASF SE, Teijin Limited, ELG Carbon Fibre Ltd, Koninklijke DSM N.V., Trelleborg AB, Kureha Corporation, among others.

The Asia Pacific region is the most vital consumer of Carbon Fibers globally, with the use poised to grow, with primary consumption in populated areas and countries, including South Asia and China. Millions of people live in this region and thus have an increased need for transportation, increasing the need for automobiles and aircraft, thus driving the regional demand for carbon fibers. India has been one of the biggest customers of airplanes with nearly 200+ Airbus A320 neo's lined up for the coming years, thus adding to the regional demand for carbon fibers globally. Further, with the greater knowledge of the relationship between weight reduction and better fuel efficiency, countries and individuals are switching towards lightweight vehicles with components made from carbon fibers, increasing fuel efficiency, thus driving the demand for carbon fibers in the region. Furthermore, even with the electric car boom, the need for carbon fibers is poised to increase due to their use in critical areas of a vehicle, the same for both electric and conventional vehicles. The increased usage of carbon fibers in the 3D printing technologies for their high strength and rigidity allows for higher accuracy in manufacturing parts for various end-use industries such as aerospace, automotive, and dental. Thus all the factors have added up to the drive of

carbon fibers globally.

In August 2021, Sinopec Shanghai Petrochemical announced that it would complete its new carbon fiber at the cost of USD 540.11 Million.

In August 2021, Orion Engineered Carbons started the production of its second plant in China for specialty and high-performance materials for producing 65-70 kilotons per year.

In December 2020, Toray Industries, Inc., a manufacturer of carbon fibers, partnered with Joby Aviation for a supply chain agreement.

Global Carbon Fiber Market report provides deep insight into the Industrial market's current and future state across various regions. The study comprehensively analyses the Carbon Fiber market by segmenting based on the Raw Material (PAN-based Carbon Fiber, Pitch-based Carbon Fiber), Form (Composite Carbon Fiber, Non-Composite Carbon Fiber), Fiber Type (Virgin Carbon Fiber, Recycled Carbon Fiber), Product Type (Continuous Carbon Fiber, Long Carbon Fiber, Short Carbon Fiber), Modulus (Standard Modulus, Intermediate Modulus, High Modulus), Tow (Small Tow (<=24k), Large Tow(>24k)), End-Use Industries (Aerospace, Automotive, Energy, Others), and Geography (Asia-Pacific, North America, Europe, South America, and Middle-East and Africa). The report examines the market drivers and restraints and the impact of Covid-19 on the market growth in detail. The study covers and includes emerging market trends, developments, opportunities, and challenges in the industry. This report also covers extensively researched competitive landscape sections with prominent companies and profiles, including their market shares and projects.

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ay Industries, Inc.

3M

corporation

ited

g Carbon Fibre Ltd

inklijke DSM N.V.

eborg AB

wAksa Advanced Composites Holdings BV

pon Graphite Fiber Corporation

ong An Xin Technology Co., Ltd.

lanese Corporation

lvay SA

lian Xingke Carbon Fiber Co., Ltd.

mosa Plastics Corporation

orizol Corporation

rary Co. Ltd

os Group Ltd.

ekwang Industries Co., Ltd.

n Qifeng Chemical FiberCo., Ltd.

xcel Corporation

GL Carbon

osung Advanced Materials

mentive Performance Materials Inc.
ent Corporation
trex Plc
vestro AG
ntsman Corporation
EOS Corporation
subishi Chemical Holdings
matex

Companies is not exhaustive

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