SCOTTS INTERNATIONAL

Carbon Fiber Market by Raw Material Type (PAN, Pitch), Fiber Type (Virgin, Recycled), Product Type, Modulus (Standard, Intermediate, High), Application (Composites, Non-Composites), End-Use Industry, & Region - Global Forecast to 2033

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Report description:

The carbon fiber market is estimated at USD 7.1 billion in 2023 and is projected to reach USD 23.2 billion by 2033, at a CAGR of 13.2% from 2023 to 2033. Pitch is a viscoelastic material made up of aromatic hydrocarbons, produced during the distillation of carbon-based materials such as plants, crude oil, and coal. Pitch-based carbon fibers have a wide range of tensile moduli, ranging from low modulus (55GPa) to ultra-high modulus (900GPa). High modulus is very appealing for applications requiring high stiffness and light weight. Aside from high modulus and stiffness, pitch-based carbon fiber has a high thermal conductivity.
''In terms of value, continuous carbon fiber accounted for the largest share of the overall carbon fiber market.''
Continuous carbon fibers offer higher tensile strength than other carbon fiber product types. These fibers can be used in layup, weaving, prepreg, filament winding, braiding, and pultrusion processes for manufacturing composite parts for various end-use industries such as aerospace & defense, automotive, and wind energy. Continuous carbon fibers are ideal for making unidirectional tapes used in aerospace and FRP tank applications..

''In terms of value, aerospace & defense industry accounted for the largest share of the overall Carbon fiber market.''
In 2022, the aerospace & defense industry accounted for the largest share of the carbon fiber market, in terms of value. This is attributed to the high consumption of carbon fiber by commercial and defense aircraft manufacturers such as Boeing, Airbus, and Lockheed Martin. There is a high demand for carbon fiber in next-generation aircraft. Carbon fiber composites are used to design carbon fiber fuselage and wings in the aerospace & defense industry. New players such as Irkut Corporation (Russia) and COMAC Aerospace Company (China) have also started producing commercial aircraft, which has further boosted the consumption of carbon fibers in the aerospace & defense industry.
"During the forecast period, the Carbon Fiber market in North America region is projected to be the second-largest region."

New product developments, capacity expansions, and the establishment of plants by various leading players in this region majorly drive the growth of the carbon fiber market in North America. Demand for composites from the automotive, aerospace & defense, and wind energy industries is projected to increase due to new product innovations and technological advancements in the applications of composites in these industries. In North America, the aerospace & defense, automotive, and wind energy industries are the major industries which have applications of carbon fiber composites.

This study has been validated through primary interviews with industry experts globally. These primary sources have been divided into the following three categories:

- By Company Type- Tier 1- 40%, Tier 2- 33%, and Tier 3- 27%
- By Designation- C Level- 50%, Director Level- 30%, and Others- 20%
- By Region- North America- 15%, Europe- 50%, Asia Pacific (APAC) - 20%, Latin America-10%, Middle East & Africa -5%.

The report provides a comprehensive analysis of company profiles:

Prominent companies include Toray Industries Inc., (Japan), Teijin Limited (Japan), Mitsubishi Chemical Group Corporation (Japan), Hexcel Corporation (US), Solvay (Belgium), SGL Carbon (Germany), Hyosung Advanced Materials (South Korea), Zhongfu Shenying Carbon Co., Ltd. (China), Kureha Corporation (Japan), DowAksa (Turkey), Jilin Chemical Fiber Group Co., Ltd. (China), Jiangsu Hengshen Co., Ltd. (China), Anshan Sinoda Carbon Fibers Co., Ltd. (China), and China National Bluestar (Group) Co., Ltd. (China).

Research Coverage

This research report categorizes the Carbon Fiber Market by Raw Type (PAN-based Carbon Fiber, Pitch-based Carbon Fiber), Fiber Type (Virgin, Recycled), Modulus (Standard Modulus, Intermediate Modulus, High Modulus),Product Type (Continuous Carbon Fiber, Long Carbon Fiber, Short Carbon Fiber), Application (Composites, Non-Composites), End-Use Industry (Aerospace & Defense, Wind Energy, Automotive, Pipes, Sporting Goods, Medical & Healthcare, Construction & Infrastructure, Pressure Vessels, and Others) and Region (North America, Europe, Asia Pacific, the Middle East & Africa, and Latin America). The scope of the report includes detailed information about the major factors influencing the growth of the Carbon fiber market, such as drivers, restraints, challenges, and opportunities. A thorough examination of the key industry players has been conducted in order to provide insights into their business overview, solutions, and services, key strategies, contracts, partnerships, and agreements. New product and service launches, mergers and acquisitions, and recent developments in the Carbon fiber market are all covered. This report includes a competitive analysis of upcoming startups in the Carbon fiber market ecosystem.

Reasons to buy this report:

The report will help the market leaders/new entrants in this market with information on the closest approximations of the revenue numbers for the overall Carbon Fiber market and the subsegments. This report will help stakeholders understand the competitive landscape and gain more insights to position their businesses better and plan suitable go-to-market strategies. The report also helps stakeholders understand the pulse of the market and provides them with information on key market drivers, restraints, challenges, and opportunities.

The report provides insights on the following pointers:

- Analysis of key drivers (Rising demand for manufacture of satellite parts, High demand from aerospace & defense industry, Stringent eco-friendly regulations to drive adoption of carbon fiber and related composites in automotive applications, Rising use in wind energy industry, Rising demand of regular tow carbon in pressure vessels leading the growth of carbon fiber based composites), restraints (high cost of carbon fiber, lack of standardization in manufacturing technologies), opportunities (Increased investments for development of low-cost coal-based carbon fibers, potential opportunities in new applications, increasing demand for fuel cell electric vehicles (FCEVs), rising use of carbon fiber in 3D printing), and challenges (Production of low-cost carbon fiber, capital intensive production and complex manufacturing process) influencing the growth of the Carbon Fiber market

- Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new product & service launches in the Carbon fiber market

- Market Development: Comprehensive information about lucrative markets - the report analyses the Carbon Fiber market across varied regions.

- Market Diversification: Exhaustive information about new products & services, untapped geographies, recent developments, and investments in the Carbon Fiber market

- Competitive Assessment: In-depth assessment of market shares, growth strategies and service offerings of leading players like Toray Industries Inc., (Japan), Teijin Limited (Japan), Mitsubishi Chemical Group Corporation (Japan), Hexcel Corporation (US), Solvay (Belgium), SGL Carbon (Germany), Hyosung Advanced Materials (South Korea), Zhongfu Shenying Carbon Co., Ltd. (China), Kureha Corporation (Japan), DowAksa (Turkey), Jilin Chemical Fiber Group Co., Ltd. (China), Jiangsu Hengshen Co., Ltd. (China), Anshan Sinoda Carbon Fibers Co., Ltd. (China), and China National Bluestar (Group) Co., Ltd. (China), among others in the Carbon fiber market

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