

# **Advanced Carbon Materials Market Analysis By Product (Carbon Fibers, Graphene, Carbon Nanotube, Structural Graphite, Carbon Foams) By Application (Aerospace & Defense, Energy, Electronics, Sports, Automotive, Construction) And Segment Forecasts To 2024**

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## **Abstracts**

The global advanced carbon materials market is expected to reach USD 5.29 billion by 2024, according to a new report by Grand View Research, Inc. Growing demand for fiberglass products in construction, automotive and energy applications, as a lightweight material, is likely to have a positive impact. Furthermore, technological advancement for the development of carbon nanomaterials is expected to increase the industry penetration over the next eight years.

The demand for graphene was 481.2 tons in 2015 and is projected to witness growth in light of its increasing usage as a protective coating for manufacturing flexible electronic devices and smartphones. In addition, companies are focusing on innovation to develop products catering to niche applications. In June 2015, Sweden-based Graphensic developed a new graphene-derived resistance standard measurement kit which is capable of observing Quantum Hall effect at high temperature and low magnetic temperature.

Further key findings from the report suggest:

Energy is expected to foresee revenue growth at a CAGR of 6.8% from 2016 to 2024. Growing demand for photovoltaic (PV) cells in light of providing high efficiency as compared to conventional solar devices is expected to promote the usage of advanced

materials, particularly carbon nanotubes as filling agents.

Aerospace & defense generated revenue worth USD 1.06 billion in 2015. Increasing utilization of CFRP for manufacturing fuselage components and wing boxes for optimizing aerodynamic efficiency is likely to have a positive impact on market growth over the next eight years.

Fibers are likely to witness volume growth at a CAGR of 6.5% from 2016 to 2024. Significant demand for carbon fiber reinforced plastics (CFRP) in automotive, construction and electronics applications in light of providing excellent high initial strength-to-weight ratio is expected to remain a favorable factor.

Asia Pacific generated a revenue of USD 878.2 million in 2015 and is anticipated to witness substantial gains over the forecast period on account of the expansion of the manufacturing sector. In May 2016, Foxconn announced the establishment of Apple iPhone manufacturing facility at USD 10 billion in Maharashtra by 2020. This initiative is expected to open new markets for these advanced materials over the forecast period.

Key manufacturers include Toray Industries, Hexcel, Mitsubishi Rayon, Showa Denko, Thomas Swan, Graphenea SA, and Graphene Laboratories. Companies are focusing on new product development and formation of strategic alliances with technological companies. For instance, in July 2016, Showa Denko developed a new grade of carbon nanotube under the brand name, VGCFTM-X, with optimized design for resin composite applications.

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