

Activated Carbon Fiber - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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Report description:

The Activated Carbon Fiber Market size is estimated at USD 429.49 million in 2025, and is expected to reach USD 515.30 million by 2030, at a CAGR of 3.71% during the forecast period (2025-2030).

During the COVID-19 pandemic in 2020, the market experienced a sharp decline in growth in output, sales, marketing, and distribution. The global shutdown has resulted in a series of market closures that have resulted in significant losses to many key industries. However, the market has recovered in the two years to post strong growth.

Key Highlights

- Increasing environmental concerns related to air and water pollution, coupled with activated carbon fiber's superior properties in comparison to that of powdered activated carbons (PAC) and granular activated carbons (GAC), are expected to drive the demand for the market during the forecast period.
- Concerns related to its raw materials, such as that synthetic fiber, which is non-degradable and tends to bind with molecules of harmful chemical pollutants in wastewater, such as flame retardants and pesticides, are likely to hinder the market's growth.
- Rising demand from the protective clothing industry is projected to act as an opportunity for the market in the future.
- The North American region is expected to dominate the market and is also likely to witness the highest CAGR during the forecast period.

Activated Carbon Fiber (ACF) Market Trends

Increasing Demand from the Purification Industry

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- One of the major applications of activated carbon fiber includes purification. Gas and water purification involve the major usage of activated carbon fibers owing to their properties.
- High-purity gases are required in various industries and laboratories. The presence of impurities, such as moisture, hydrocarbons, oxygen, or sulfur compounds, can lead to interference or inefficient use of the gases. This creates a need for the purification of industrial gases.
- Gas purification is required for automotive emission control, aircraft cabin air purification, emission and odor control, gas masks, and maintaining indoor air quality. Moreover, gas purification requirements are increasing in numerous industries, with the diversifying application of gases and growing concerns about air pollution.
- According to the Organisation Internationale des Constructeurs d'Automobiles (OICA), around 80.15 million vehicles were produced across the world last year, witnessing a growth rate of 3% compared to ~77.71 million vehicles in 2020, thereby enhancing the demand for activated carbon fibers for automotive emission control.
- Water purification in India is expected to register a decent increase during the forecast period, owing to various government initiatives. The Council on Energy, Environment, and Water (CEEW), in association with the 2030 Water Resources Group, is planning to improve wastewater management in India, along with increasing private investments to build wastewater treatment plants.
- All the aforementioned factors are expected to drive the global market during the forecast period.

North America to Dominate the Market

- North America is expected to dominate the activated carbon fiber market due to increasing demand from purification, chemicals, and the medical industry in countries such as the United States and Canada.
- The United States is a major industrialized nation that houses multiple industries in heavy-scale, medium-scale, and small-scale categories. The country is known for its booming commercial activities. Moreover, the United States is one of the highest consumers of water in the world. Approximately 80% of the US water and wastewater treatment industry is owned and managed publicly.
- However, the rural part of the country has significantly lower access to water treatment infrastructure and facilitates in comparison to the urban areas. Since 2003, the United States Department of Agriculture (USDA) has funded around USD 10 billion for the construction and maintenance of 7,500 rural water and wastewater systems and is planning to further increase its investment in the coming years. This growing investment in water treatment in the country is likely to boost the demand for activated carbon fiber.
- According to the American Chemistry Council, the value of United States chemical shipments accounted for USD 768.9 billion last year, compared to USD 696 billion in 2020, thereby supporting the demand for activated carbon fiber-based filters from the chemical industry.
- The increasing geriatric population and the growing requirement for medical facilities for the treatment of chronic diseases have been supporting the growth of the healthcare sector, as well as the consumption of activated carbon fibers for various applications in the country.
- In the healthcare industry in Canada, the medical device sector is a highly diversified and export-oriented industry that manufactures equipment and supplies. The sector is driven by product innovation. The industry can draw on world-class innovative research being conducted in Canadian universities, research institutes, and hospitals, some of which have been spun off into Canadian medical device companies.
- Thus, rising demands from the above-mentioned factors are expected to drive growth in the North American region.

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Activated Carbon Fiber (ACF) Industry Overview

The activated carbon fiber market is fragmented in nature. Key players in the activated carbon fiber market include (not in any particular order) Osaka Gas Chemicals Co. Ltd, Kuraray Co. Ltd, Unitika Ltd, Anshan Sinocarb Carbon Fibers Co. Ltd, Kuraray Co. Ltd, and Toyobo Co. Ltd.

Additional Benefits:

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

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