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Activated Carbon Mercury Control Market Forecasts to 2032 – Global Analysis By Type (Powdered Activated Carbon (PAC), Granular Activated Carbon (GAC) and Extruded Activated Carbon), Technology, Application, End User and By Geography

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Abstracts

According to Stratistics MRC, the Global Activated Carbon Mercury Control Market is accounted for $2.5 billion in 2025 and is expected to reach $4.2 billion by 2032 growing at a CAGR of 7.7% during the forecast period. Activated Carbon Mercury Control refers to a method used to reduce mercury emissions from industrial sources, particularly coal-fired power plants. In this process, activated carbon—a highly porous material with a large surface area—is injected into flue gases to capture mercury vapor. The mercury binds to the surface of the carbon particles, which are then removed through particulate control devices like fabric filters or electrostatic precipitators. This technique is effective for controlling both elemental and oxidized forms of mercury.

According to the U.S. Department of Energy (DOE), activated carbon is used in 5% of renewable energy facilities for mercury control, particularly biomass plants, and the cost of activated carbon for mercury control in industrial applications is approximately USD 3,000 per ton.

Market Dynamics:

Driver:

Stringent Environmental Regulations

Stringent environmental regulations are absolutely driving the Activated Carbon Mercury

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Control Market by mandating the reduction of mercury emissions from industrial processes, especially in coal-fired power plants and waste incineration. These regulations compel industries to adopt effective emission control technologies, boosting demand for activated carbon solutions. As compliance becomes non-negotiable, manufacturers invest in advanced mercury capture systems, fueling market growth. This regulatory push not only fosters environmental protection but also stimulates innovation and expansion within the activated carbon industry.

Restraint:

High Operational Costs

High operational costs pose a significant challenge to the activated carbon mercury control market. The increased expenses related to production, transportation, and maintenance of specialized equipment for mercury removal processes strain the financial resources of manufacturers. This results in higher end-product costs, limiting market accessibility, especially for smaller industries. Additionally, the pressure of maintaining profitability in the face of rising costs hinders technological advancements and market expansion.

Opportunity:

Technological Advancements

Technological advancements are definitely driving the market by enhancing the efficiency and effectiveness of mercury capture systems. Innovations in activated carbon production, such as tailored pore structures and surface modifications, improve adsorption capacity and performance in industrial applications. Additionally, advancements in injection systems and monitoring technologies enable precise deployment and real-time emissions tracking. These developments support stricter environmental regulations, lower operational costs, and increased adoption across sectors, ultimately fostering market growth and environmental sustainability.

Threat:

Supply Chain Constraints

Supply chain constraints have had a negative impact on the Activated Carbon Mercury Control market, leading to delays in production and distribution. Shortages of raw

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materials, transportation disruptions, and manufacturing slowdowns have hindered the timely delivery of activated carbon products needed for mercury control. These challenges have increased operational costs and led to a backlog in demand, particularly affecting industries that rely on effective mercury filtration, such as energy and chemical production. Thus, it limits market expansion.

Covid-19 Impact

The COVID-19 pandemic significantly disrupted the activated carbon mercury control market, leading to supply chain interruptions, increased raw material costs, and operational halts in key industries like mining and cement production. However, the market demonstrated resilience, with a robust recovery beginning in 2022, driven by stringent environmental regulations and a growing emphasis on air quality management. Technological advancements in activated carbon manufacturing further contributed to the market's resurgence.

The injected activated carbon (IAC) segment is expected to be the largest during the forecast period

The injected activated carbon (IAC) segment is expected to account for the largest market share during the forecast period, due to its high efficiency in mercury capture and adaptability in various emission control systems. IAC offers superior surface area and reactivity, enabling faster and more effective mercury adsorption, especially in coal-fired power plants and industrial boilers. Its compatibility with existing flue gas treatment infrastructure reduces implementation costs, while growing environmental regulations are boosting adoption, positioning IAC as a critical enabler in sustainable emissions control strategies.

The power generation segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the power generation segment is predicted to witness the highest growth rate, due to stringent environmental regulations targeting mercury emissions from coal-fired power plants. As demand for electricity grows, especially in emerging economies, power producers increasingly invest in mercury capture technologies to comply with clean air standards. This has led to a surge in the adoption of activated carbon-based solutions, boosting market growth and innovation in high-performance sorbents tailored for efficient emission reduction.

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Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share as industries and power plants adopt activated carbon for mercury removal, the region benefits from enhanced environmental sustainability and regulatory compliance. This market also supports the development of green technologies, creating economic growth and job opportunities. Moreover, it helps mitigate the harmful effects of mercury pollution on public health, contributing to overall regional well-being.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR, owing to increased industrial demand for mercury removal solutions. The rising awareness of air and water pollution, coupled with the need for cleaner technologies in industries like power generation and manufacturing, is fueling the adoption of activated carbon for mercury control. Furthermore, technological advancements and the shift toward sustainable practices in environmental management are driving the market, ensuring its continued expansion and positive impact.

Key players in the market

Some of the key players profiled in the Activated Carbon Mercury Control Market include Calgon Carbon Corporation, Cabot Corporation, Jacobi Carbons AB, Haycarb PLC, Donau Chemie AG, CarboTech AC GmbH, Albemarle Corporation, NUCON International Inc., Carbon Activated Corporation, Kureha Corporation, Osaka Gas Chemicals Co., Ltd., Ingevity Corporation, BASF SE, General Carbon Corporation, Donau Carbon GmbH and Active Char Products Pvt Ltd.

Key Developments:

In April 2025, BASF announced its first Canadian Master Research Agreement (MRA) with the University of Toronto, marking a significant milestone in the company's efforts to expand its research collaborations in North America. This partnership aims to streamline innovation projects and foster collaboration between BASF researchers and Canadian academics.

In October 2024, BASF made a strategic partnership with Aspen Aerogels to enhance its aerogel product offerings and expand its market reach. This partnership is set to drive innovation in aerogel technologies, particularly in high-performance insulation

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materials.

Types Covered:

- Powdered Activated Carbon (PAC)
- Granular Activated Carbon (GAC)
- Extruded Activated Carbon

Technologies Covered:

- Injected Activated Carbon (IAC)
- Fixed Bed

Applications Covered:

- Coal-fired Power Plants
- Cement Production
- Waste Incineration
- Industrial Boilers
- Other Applications

End Users Covered:

- Power Generation
- Chemical
- Cement

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- Other End Users

Regions Covered:

- North America
  - US
  - Canada
  - Mexico
- Europe
  - Germany
  - UK
  - Italy
  - France
  - Spain
  - Rest of Europe
- Asia Pacific
  - Japan
  - China
  - India
  - Australia
  - New Zealand

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South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:
- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2022, 2023, 2024, 2026, and 2030
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

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- Company Profiling
  - Comprehensive profiling of additional market players (up to 3)
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- Regional Segmentation
  - Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)
- Competitive Benchmarking
  - Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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List Of Tables

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