

Activated Carbon

US Industry Study with Forecasts for 2020 & 2025

Study #3467 | October 2016 | \$5300



US demand for activated carbon, including virgin and reactivated products sold by activated carbon suppliers, is expected to rise 3.5 percent per year through 2020. Forecast growth is expected to be considerably slower than the gains seen in the 2010-2015 period, when the market for activated carbon significantly expanded in response to two key environmental regulations:

- Disinfection Byproducts (DBP) Rule, which required that municipal water treatment facilities meet disinfection byproduct removal standards by 2015
- Mercury and Air Toxics Standards (MATS), which set limits on mercury emissions from coal-fired power plants (CFPPs), clinker cement plants, and other facilities, by early 2016

Coal-generated electricity requires air purification

In industrial air purification -- the largest application for activated carbon -- demand is projected to increase at an above-average pace. The US' continued reliance on coal-generated electricity will necessitate continued use of powdered activated carbon for air purification. In addition, powdered activated carbon generally is not reactivated, so these products must be fully replaced when spent. The number of activated carbon injection (ACI) systems is also

expected to increase, as some CFPPs are expected to install additional ACI systems to either replace temporary mercury removal systems or to supplement existing equipment.

Water treatment applications exhibit slow growth

In water treatment -- the second largest application for activated carbon -- gains are expected to be slower than the overall average. In municipal drinking water, granular activated carbon is favored for the removal of DBPs. Because granular activated carbon is used in large volumes in these applications, many users have invested in on-site reactivation equipment or have contracted with outside companies for reactivation services. This will limit demand for virgin or regenerated carbon sold by suppliers.

Study coverage

This study analyzes the US activated carbon market. It presents historical demand data (2005, 2010 and 2015) plus forecasts (2020 and 2025) by type (powdered, granular), application (liquid phase, gas phase) and US region. The study also considers key market environment factors, assesses the industry structure and evaluates company market share.

CONTENTS SUMMARY

Executive Summary

Market Environment

Supply & Demand

- Product Shipments & Inventories
- Production Capacity
- Reactivation Activity
 - Strategic Considerations
 - Reactivation Methods
 - Reactivation Capacity
- Foreign Trade
- Supply & Demand
- Demand by Material
- Pricing Trends

Types

- Powdered Activated Carbon
 - Production Capacity
 - Supply & Demand
 - Demand by Application
- Granular Activated Carbon
 - Production Capacity
 - Supply & Demand
 - Demand by Application
- Other Activated Carbon Products
 - Supply & Demand
 - Demand by Type

Liquid Phase Applications

- Water Treatment
 - Water Withdrawal & Use Trends
 - Activated Carbon Demand
- Food & Beverage Processing
 - Food & Beverage Industry Overview
 - Activated Carbon Demand
- Pharmaceutical & Medical
 - Pharmaceutical Industry Overview
 - Activated Carbon Demand
- Mining
 - Mining Industry Overview
 - Activated Carbon Demand
- Other Liquid Phase Applications

Gas Phase Applications

- Industrial Air Purification
 - Mercury Removal
 - Industrial Gas Stream Treatment
 - HVAC & Other Industrial Air Purification
- Motor Vehicles
 - Motor Vehicle Industry Outlook
 - Emissions Canister Activated Carbon Demand
 - Other Motor Vehicle Activated Carbon Demand
- Other Gas Phase Applications

Regions

- Regional Trends
 - Population Patterns
 - Economic Outlook
 - Coal-Fired Electricity Overview
- Regional Demand for Activated Carbon
 - Northeast - Economic Overview & AC Demand
 - New England
 - Middle Atlantic

- Midwest - Economic Overview & AC Demand
 - East North Central
 - West North Central
- South - Economic Overview & AC Demand
 - South Atlantic
 - East South Central
 - West South Central
- West - Economic Overview & AC Demand
 - Mountain
 - Pacific

Industry Structure

- Market Share
- Competitive Strategies
- Acquisitions & Divestitures
- Cooperative Agreements
- Marketing & Distribution
- Technology & Manufacturing
- Research & Development
 - Raw Material Development
 - Other R&D Activities
- Participating Companies

TABLES SUMMARY

Executive Summary

- 1 Summary Table

Supply & Demand

- 1 AC Production & Shipments
- 2 US Virgin AC Production Capacity by Company, 2015
- 3 US AC Reactivation Capacity by Company, 2015
- 4 Foreign Trade in AC
- 5 US AC Imports, 2010-2015
- 6 US AC Exports, 2010-2015
- 7 AC Supply & Demand
- 8 AC Demand by Material
- 9 AC Pricing

Types

- 1 AC Demand by Type & Application
- 2 Advantages & Disadvantages of Powdered AC
- 3 Virgin Powdered AC Production Capacity by Company, 2015
- 4 Powdered AC Supply & Demand
- 5 Powdered AC Demand by Application
- 6 Advantages & Disadvantages of Granular AC
- 7 Virgin Granular AC Production Capacity by Company, 2015
- 8 Granular AC Supply & Demand
- 9 Granular AC Demand by Application
- 10 Other AC Supply & Demand
- 11 Other AC Demand by Type

Liquid Phase Applications

- 1 Liquid Phase AC Demand by Application & Type
- 2 Water Withdrawal & Water Use
- 3 AC Demand in Water Treatment by Type & Application
- 4 AC Demand in Drinking Water Treatment by End Use & Type

- 5 AC Demand in Municipal Drinking Water Treatment by Product
- 6 AC Demand in Residential Drinking Water Treatment
- 7 AC Demand in Wastewater & Sewage Treatment Applications by Product
- 8 AC Demand in Groundwater Treatment & Other Water Treatment by Product
- 9 Food & Beverage Industry Indicators
- 10 AC Demand in Food & Beverage Processing by Application & Type
- 11 AC Demand in Sweetener Processing by Application & Type
- 12 AC Demand in Other Food & Beverage Processing Applications
- 13 Pharmaceutical Shipments
- 14 AC Demand in Pharmaceutical & Medical Applications
- 15 Nonfuel Mining Materials Handled
- 16 AC Demand in Mining Applications
- 17 AC Demand in Other Liquid Phase Applications

Gas Phase Applications

- 1 AC Demand in Gas Phase Applications by Application & Type
- 2 AC Demand in Industrial Air Purification by Application & Type
- 3 AC Demand in Mercury Removal
- 4 AC Demand in Industrial Gas Stream Treatment
- 5 AC Demand in HVAC & Other Industrial Air Purification
- 6 AC Demand in Motor Vehicle Applications
- 7 Motor Vehicle Indicators
- 8 AC Demand in Motor Vehicle Emissions Canisters
- 9 AC Demand in Other Motor Vehicle Applications
- 10 AC Demand in Other Gas Phase Applications
- 11 AC Demand in Solvent Recovery
- 12 AC Demand in All Other Gas Phase Applications

Regions

- 1 US Population by Region & Subregion
- 2 US Gross Domestic Product by Region & Subregion
- 3 US Coal-Fired Electricity Generation by Region
- 4 AC Demand by Region & Type
- 5 Northeast Economic Overview
- 6 Northeast AC Demand by Subregion, Market, & Type
- 7 Midwest Economic Overview
- 8 Midwest AC Demand by Subregion, Market, & Type
- 9 South Economic Overview
- 10 South AC Demand by Subregion, Market, & Type
- 11 West Economic Overview
- 12 West AC Demand by Subregion, Market, & Type

Industry Structure

- 1 Selected AC Sales by Company, 2015
- 2 Selected Cooperative Agreements

GAS PHASE APPLICATIONS

Industrial Air Purification

In 2015, industrial air purification uses accounted for 78 percent of activated carbon used in gas phase applications, and 39 percent of US activated carbon demand. This represents significant growth from 2005, when industrial air purification applications represented less than half of total gas phase activated carbon demand. Gains resulted from the phase-in of the EPA's Mercury & Air Toxics Standards (MATS), which had a final implementation deadline in 2016. During the phase-in, the number of activated carbon injection (ACI) systems for mercury control in the US increased significantly. Going forward, gains in the industrial purification market will slow as the mercury removal market matures.

The use of activated carbon for removing industrial pollutants from gas streams (HVAC air filters, radon filters) is overseen by government agencies such as the US Environmental Protection Agency and the Occupational Safety and Health Administration (OSHA) have a strong influence on activated carbon demand in the market. As the use of industrial air purification equipment is also directly tied to the number and type of manufacturing facilities in the US, the overall state of the economy and the health of the country's manufacturing sector are also key indicators of demand.

Powdered activated carbon is currently the largest product type in industrial air purification applications, as it is the preferred product type

©2016 by MarketResearch.com, Inc. - All rights reserved

TABLE V-3

ACTIVATED CARBON DEMAND IN WATER TREATMENT BY TYPE & APPLICATION (million pounds)

Item	2005	2010	2015	2020	2025
Water Use (trillion gallons)					
lbs activated carbon/mil gallons water					
Water Treatment AC Demand					
By Application:					
Drinking Water					
Wastewater & Sewage					
Groundwater & Other					
By Type:					
Powdered					
Granular					
% water treatment					
Liquid Phase Activated Carbon Demand					

Source: The Freedonia Group

TABLE III-7

ACTIVATED CARBON SUPPLY & DEMAND (million pounds)

Item	2005	2010	2015	2020	2025
Gross Domestic Product (bil 2009\$)					
lbs activated carbon/mil \$ GDP					
Activated Carbon Demand					
net exports					
Activated Carbon Shipments					
Powdered					
Granular:					
Virgin GAC					
Regenerated GAC					
Other					

Source: The Freedonia Group

This study can help you:

- Determine your market & sales potential
- Learn more about industry competitors
- Assess new products & technologies
- Identify firms to merge with or acquire
- Complement your research & planning
- Gather data for presentations
- Confirm your own internal data
- Make better business decisions

Activated Carbon

US Industry Study with Forecasts for 2020 & 2025

Study #3467

October 2016

\$5300



Related Studies

World Enzymes

Global demand for enzymes is projected to grow on average 4.6 percent per annum through 2020 to \$7.2 billion. Food and beverages will remain the largest market for enzymes by value, with the most rapid growth in biocatalysts. The competitive nature of the pharmaceutical industry will lead to strong growth in specialty enzyme demand. This study assesses the \$5.8 billion enzyme market, giving forecasts for 2020 and 2025 for demand by type and market in 6 regions and 17 countries. The study also evaluates company market share and profiles global industry participants.

#3417.....June 2016..... \$6300

World Activated Carbon

Worldwide demand for activated carbon -- including powdered, granular, and other types -- will rise 6.0 percent per year to 1.9 million metric tons in 2020. China and other developing countries in the Asia/Pacific and Africa/Mideast regions will post the best growth due to infrastructure improvements and higher environmental standards. Powdered activated carbon will see the best growth. The study details the global 1.4 million metric ton AC market, with forecasts for 2020 and 2025 by type. The study also analyzes company market share and profiles global competitors.

#3404.....April 2016..... \$6500

Water Treatment Chemicals

Demand for water treatment chemicals in the US is forecast to rise 3.2 percent per year to \$7.5 billion in 2019, with volume reaching 15.5 billion pounds. Foam control agents and coagulants and flocculants will be the fastest growing water treatment chemicals. Energy and manufacturing will be the fastest growing markets. This study analyzes the \$6.4 billion US water treatment chemical industry, with forecasts for 2019 and 2024 by product, application and market. The study also evaluates company market share and profiles industry players.

#3322.....July 2015..... \$5300

Pharmaceutical Chemicals

US demand for pharmaceutical chemicals will rise 6.5 percent annually to \$46.9 billion in 2019. Hormones will be the fastest growing products, led by active ingredients of anticancer, antidiabetic, and hormone replacement formulations. Central nervous system chemicals will remain the largest segment, and will be the second fastest growing. This study analyzes the \$34.2 billion US pharmaceutical chemical industry, with forecasts for 2019 and 2024 by product and raw material. The study also evaluates company market share and profiles industry participants.

#3280.....June 2015..... \$5200

Contact Freedonia

1.800.927.5900 (US & Canada)

+1 440.684.9600 (Int'l)

email: info@freedoniagroup.com

website: freedoniagroup.com

Freedonia's methods

- Establishing consistent economic & market forecasts
- Using input/output ratios, flow charts & other economic methods to quantify data
- Employing in-house analysts who meet stringent quality standards
- Interviewing key industry participants, experts & end users
- Researching a proprietary database that includes trade publications, government reports & corporate literature

About The Freedonia Group

The Freedonia Group is a leading international industry market research company that provides its clients with information and analysis needed to make informed strategic decisions for their businesses. Studies help clients identify business opportunities, develop strategies, make investment decisions and evaluate opportunities and threats. Freedonia research is designed to deliver unbiased views and reliable outlooks to assist clients in making the right decisions. Freedonia capitalizes on the resources of its proprietary in-house research team of experienced economists, professional analysts, industry researchers and editorial groups. Freedonia covers a diverse group of industries throughout the United States and other world markets. Industries analyzed by Freedonia include:

Automotive & Transport • Chemicals • Construction & Building Products • Consumer Goods • Energy & Petroleum • Industrial Components • Healthcare & Life Sciences • Machinery & Equipment • Metals, Minerals & Glass • Packaging • Plastics & Other Polymers • Security • Services • Textiles & Nonwovens • Water Treatment

The Freedonia Group is a division of MarketResearch.com

About MarketResearch.com

With offices in London, New York City, and Washington D.C., MarketResearch.com is the leading provider of global market intelligence products and services. With research reports from more than 720 top consulting and advisory firms, MarketResearch.com offers instant online access to the world's most extensive database of expert insights on industries, companies, products, and trends.



[Click here to purchase study online](#)