



Corporate Profile

Pure Water. Clean Air. Better World.



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Through air and water purification services, solutions and technologies, Calgon Carbon Corporation (NYSE: CCC) is deeply immersed in helping communities locally, nationally, and around the world meet today's most daunting air and water purification challenges.

Calgon Carbon Corporation is an acknowledged leader in the activated carbon and reactivation industry for many liquid and vapor phase applications, with complementary expertise in ultraviolet disinfection and oxidation, ion exchange technology and ballast water treatment.

Investment in Social Responsibility

With a broad global portfolio of air and purification solutions, backed by decades of practical field and applied research expertise, Calgon Carbon offers a sound investment opportunity for stakeholders committed to supporting the health, safety and livability of the planet and its inhabitants.

Research & Development

Since creating the first activated carbon products from bituminous coal in the 1940s, Calgon Carbon has been a pioneer in developing advanced products, systems and services for air and water purification.

Calgon Carbon's product portfolio now encompasses more than 700 direct market applications, including several revolutionary industry developments such as the first use of granular activated carbon (GAC) for taste and odor removal from drinking water in the early 1960s; the development of ultraviolet (UV) light technology for pathogen control in drinking water as well as chrome free carbon for military applications in the 1990s; and the application of ion exchange technology for perchlorate removal in the 2000s. Calgon Carbon is continually positioned to build on its legacy of innovation and industry leadership.

Facts & Figures

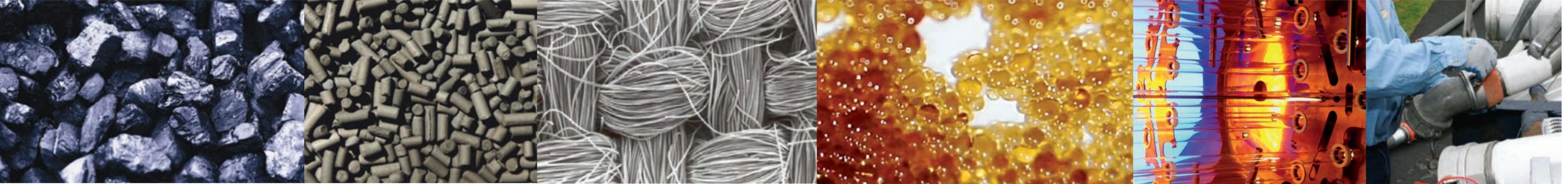
Breadth of product – Calgon Carbon is a supplier of more than 100 types of granular, powdered, and pelletized activated carbons as well as activated carbon cloth, used by thousands of customers around the world for water treatment, and other liquid and vapor phase applications.

Global solutions provider – With 23 global offices and 17 manufacturing and reactivation facilities, the company provides solutions for hundreds of market applications, from the purification of air, water, food, and pharmaceuticals to the separation of gas and mercury removal from coal-fired power plants.

Pioneers in innovation – Calgon Carbon has more than 240 patents with company scientists and engineers dedicated to developing new processes, standards, and methods that make water and air purification more efficient, productive, and predictable.

Innovation is our cornerstone. Calgon Carbon remains committed to the goal it established more than a half-century ago: to help customers meet their toughest purification, separation, and concentration demands.

Advanced Products and Services



Granular Activated Carbon (GAC)

Activated carbon is a porous material that removes organic compounds from liquids and gases by a process known as “adsorption.” Calgon Carbon created GAC from reagglomerated bituminous coal in the 1940s, and remains on the cutting edge of innovation, offering an exceptional range of products engineered specifically for the purification of water, air, liquids and gases to sustain human life and facilitate numerous industrial processes.

Powdered & Pelletized Activated Carbon

Designed for use in water and vapor phase applications, such as solvent recovery, gas processing and purification, as well as energy storage and mercury removal.

Powdered activated carbon can be used in wastewater treatment, and for the removal of tastes and odors in municipal drinking water.

Activated Carbon Cloth

Used in many filtration, adsorption, and separation applications in industrial, defense, and medical markets.

Ion Exchange Technology & Equipment

Ion exchange technology is a cost-effective solution for purification, separation, recovery, and synthesis in a variety of applications. Calgon Carbon’s ion exchange technology is used to remove inorganic compounds, including nitrate, perchlorate, and hexavalent chrome from municipal water. It can also be used for ash and color removal in food processing, precious metal recovery, and amino acid purification. Calgon Carbon has installed over 350 ion exchange systems for more than 40 applications.

Ultraviolet (UV) Disinfection Technology & Equipment

Calgon Carbon is a global leader in UV disinfection/oxidation technologies for drinking water, groundwater treatment, wastewater treatment, wastewater reuse, and ballast water treatment. Over 30 years ago, Calgon Carbon created a cost-effective method for using UV to inactivate cryptosporidium and other pathogens in surface water, and later introduced one of the first advanced UV oxidation processes to remediate contaminated groundwater.

Services

Calgon Carbon technical experts provide complete analytical support, along with feasibility studies, cost evaluations and technical services:

- Emergency response
- Field services for carbon exchange
- Equipment leasing
- Transportation
- Reactivation services
- Field testing and pilot systems
- Installation and start-up

Reactivation Services

Once activated carbon’s adsorptive capacity has been exhausted, it can be returned to Calgon Carbon and thermally reactivated for recycling and reuse, eliminating the costs and long-term liability associated with the disposal of spent carbon.



Calgon Carbon Corporation offers three water purification technologies—GAC, UV disinfection, and ion exchange technology—to help customers meet regulatory standards and the water treatment needs of their community in the most economical way possible.

Pure Water



Drinking Water

Systems designed by Calgon Carbon provide clean, safe drinking water to millions of people in thousands of communities around the world. While many systems use GAC and UV disinfection technologies independently, more stringent regulations for disinfection and disinfection byproducts (DBPs), endocrine disrupting compounds (EDCs), emerging contaminants, and dissolved organic materials such as those associated with algal toxins and chemical spills are driving the development of treatment facilities that incorporate multiple treatment technologies.

Calgon Carbon's GAC, UV disinfection technology, and ion exchange technology offer local municipalities some of the world's most comprehensive resources for drinking water solutions.



Water Reuse

Water scarcity is a growing threat in many parts of the world. Calgon Carbon offers multiple technologies to convert wastewater to potable water.

One example is the use of UV light disinfection in combination with an oxidizing agent such as hydrogen peroxide to destroy organic contaminants in water. This technology, which is quickly emerging as the process of choice for indirect potable water, is highly effective for the abatement of nitrosamines, pharmaceutical products, personal care products and EDCs in wastewater.

GAC and UV oxidation have been shown to be a cost effective alternative for direct potable reuse.



Wastewater Treatment

Calgon Carbon facilitates the treatment of wastewater with three major water purification technologies, including virgin and reactivated GACs to eliminate EDCs and organic contaminants; UV disinfection to prevent the spread of pathogens to lakes, rivers, streams and coastal waters; and ion exchange technology for the perchlorate, nitrate and hexavalent chromium from industrial wastewater.



Remediation – Water Treatment

Activated carbon, UV oxidation, and ion exchange systems have long been used for the remediation of soil and water at contaminated sites. Typical applications include water treatment, soil stabilization, capping, and dewatering processes.



Ballast Water

Ship ballast tanks often carry aquatic organisms that upset the eco-balance of local ports when they are transported from one body of water to another. The Hyde GUARDIAN Gold® Ballast Water Treatment System from Hyde Marine, a subsidiary of Calgon Carbon, is a state-of-the-art, chemical-free, water-filtration and UV-disinfection system that prevents this phenomenon. Hyde Marine has been at the forefront of the ballast water industry

since the mid 1990s, and was one of the first companies to receive International Maritime Organization (IMO) Type Approval and United States Coast Guard (USCG) Alternative Management System (AMS) approval.

Brands to Know

FILTRASORB® granular activated carbon for diverse water applications

SENTINEL® UV Technology for municipal drinking water disinfection

CENTAUR® catalytic activated carbon for use in water treatment

Clean Air

Keeping the air safe and clean is a fundamental social responsibility. Calgon Carbon offers a number of solutions to help the world breathe easier by removing contaminants from the air supply.



Mercury Removal

Mercury vapors emitted by coal-fired boilers in power plants are a focus of increasing environmental regulation and industry investment. Through its FLUEPAC® powder activated carbons, Calgon Carbon offers power plant owners and operators a technology that has been field-tested and proven to remove more than 90 percent of mercury emissions from flue gas streams. Activated carbon has been recognized by the EPA as the Best Available Control Technology for mercury removal in flue gas.



Industrial – Air Treatment

The increasing emphasis on cleaner air presents new challenges for industry to treat contaminants at air emission sources. Activated carbon material and systems are utilized to capture toxic air pollutants (primarily Volatile Organics Compounds, or VOC) from petrochemical plants, land fill sites, manufacturing operations, and chemical processing facilities.



Remediation – Air Treatment

Carbon adsorption services are available to meet remediation needs for cost-effective removal of airborne contaminants at remediation sites generated by soil vapor extraction, soil venting, and air stripping. Activated carbon allows for the capture and transportation of organic contaminants from the remediation site to our reactivation facility, where the carbon is thermally regenerated for reuse.



Personal Protection Equipment/Respirators

Calgon Carbon has an extensive portfolio of activated carbon products to protect and defend against a variety of contaminants, including NIOSH gases, chemical warfare agents, and other toxic industrial chemical and materials. The company's impregnated carbon products provide military and industrial customers with the best performance available in the marketplace.

Brands to Know

FLUEPAC® powdered activated carbons for treatment of mercury in flue gas streams

ZORFLEX® activated woven carbon cloth for personal protection

VENTSORB® & VAPOR-PAC® carbon adsorption equipment for removal of VOCs at air emission sources

Work with the US Government

Calgon Carbon got its start in 1942, working with the U.S. government to develop and supply high-quality impregnated activated carbon for personal and collective protection. Today, armed forces for the U.S. and NATO still rely on Calgon Carbon to safeguard first responders and military personnel against homeland threats.

Many of the products we use today involve innovative Calgon Carbon solutions and technologies for industrial and commercial manufacturing processes designed to enhance production efficiencies, minimize waste, and remove pollutants.

Industrial Process, Food and Medical



Industrial Process – Liquid

Many manufacturing processes demand effective purification, separation, and concentration of ingredients. In addition to offering one of the industry's widest ranges of activated carbons for liquid-phase applications in the chemical and petroleum refining industries, Calgon Carbon products are used to purify amine, soda ash and other organic and inorganic chemicals.



Industrial Process – Vapor

Refiners of natural gas and manufacturers and users of other high-purity gases depend on activated carbons to remove contaminants and to capture mercury compounds that can harm process equipment. Activated carbons are also used in gasoline-vapor recovery equipment.



Food & Beverage

Activated carbons remove contaminants and impurities such as color and odor from sweeteners, food liquids, syrups, beverages, glycerin, and amino and organic acids. Continuous ion exchange units by Calgon Carbon separate, recover, purify, and synthesize a host of materials, including high-fructose corn sugar.



Metals Recovery

The mining industry values the high adsorption capacity of activated carbon to recover precious metals, along with its ability to liberate gold quickly and efficiently. Mine operators also use ion exchange units designed by Calgon Carbon in leach and waste streams to recover precious rare earth and base metals such as uranium, copper, nickel and zinc.



Medical

Granular activated carbons and ion exchange technologies are engineered to purify many products in the pharmaceutical industry, including antibiotics, steroids, vitamins, and antacids.

Additionally, activated carbon cloth is used in wound care and has been proven to reduce infection and improve patient recovery and healing.

Brands to Know

ZORFLEX® activated woven carbon cloth for medical uses

CANE CAL® virgin granular activated carbon for purification of cane sugar

CPG® granular activated carbon for purification and decolorization of many aqueous and organic liquids

Industries We Serve

Municipal Water Treatment Drinking Water • Wastewater • Water Reuse
Residential Point of Use / Point of Entry Consumer Filtration • Whole Home
Environmental Water Remediation – Water Treatment • Industrial Wastewater • Landfill
Leachate • Pond/Aquarium/Swim
Environmental Air Mercury Removal • Industrial – Air Treatment • Remediation –
Air Treatment • Organic Odors
Ballast Water
Industrial Processes Liquid Chemical • Catalyst Support • Gas Processing • Water
Processing • Ultrapure Water • Bio-based Chemicals
Food & Beverage Sweeteners • Decaffeination • Glycerin • Brewing/Bottling •
Acids/Chemical Purification • Ultrapure Water • Vitamins • Tobacco
Personal Protection Respirator • Collective • Apparel
Metals Recovery Gold • Precious Metals • Other Metals
Energy Storage Ultra Capacitors • Advanced Batteries
Medical Wound Care • Hemo-Dialysis • Pharmaceutical

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