

Catalytic Carbons

“ Ensuring that every sip of water is thoroughly purified, fresh and great-tasting ”



Chlorine and monochloramine are commonly used as drinking water disinfectants because of their effectiveness against pathogens and their ability to provide residual protection. However, chlorine produces toxic disinfection by-products (DBPs) when reacting with decaying organic matter, posing health risks. To address this issue, some regions of the world use chloramines, mainly monochloramine, in municipal water supplies. Nevertheless, chloramines and chlorine have drawbacks, causing skin and eye irritation, a chemical taste, and an impact on water quality and user experience. Removing chloramines is challenging, and standard carbon filters are proving ineffective. A comprehensive water filtration system, like a catalytic carbon filter, is essential for effective chloramine removal.

Haycarb RWAC products, also known as catalytic carbon, are produced from renewable sources and manufactured using proprietary surface modification technology. It increases their pore structure compared to standard activated carbon, enhancing catalytic activity. These catalytic carbons have been specially developed to remove chloramine while also effectively eliminating hydrogen sulfide (H₂S), heavy metals, disinfection by-products (DBP), and other emerging contaminants. We meet the stringent requirements of NSF-61, NSF-42, and PROP-65 for specific products as appropriate.

Haycarb provides a range of catalytic carbons, including coconut shell-based standard and boosted options and wood-based catalytic carbon.

▪ Standard ▪ Boosted ▪ Wood-based

APPLICATIONS

- Residential and commercial water filters (POU/POE)
- Water purification in dialysis
- Aquariums
- Drinking water purification
- Food and beverage industry
- Swimming pools
- Other commercial filters

TECHNICAL INFORMATION

Parameter	Standard	Boosted	Wood-based	Test Method	Benefit
Chloramine Removal Capacity (mg/g)	150	200	450	HC/STP/58	Higher capacity, longer filter life
Catalytic Activity °C	20	30	35	HC/STP/56	Faster reaction kinetics, Ideal for filters designed with limited contact time
Iodine No (mg/g)	1000	1100	1100	ASTM D4607	Higher efficiency, greater system economy in recovering VOC and THMs
Total Ash (% by wt)	3.0	3.0	3.0	ASTM D2866	Very low soluble impurities
Total Heavy Metal Adsorption Capacity (mg/g) (As, Hg, Pb, Cd)	0.4	0.4	0.4	HC/STP/94	Higher heavy metal removal capacity
ASTM Particle size*	8X30, 12X40, 20X50, 80X325, M325			ASTM D2862	

* Products can be customized for specific requirements



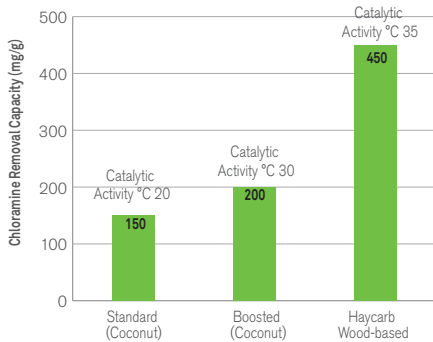


FEATURES OF WOOD-BASED CATALYTIC CARBON

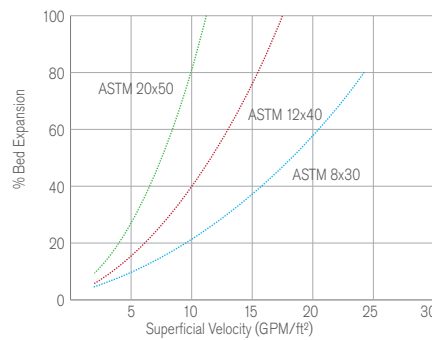
- Thermal stability up to 570°F (300°C)
- Extended catalytic activity when acid washed for regeneration
- High capacity for removing chloramine, hydrogen sulfide (H₂S), and heavy metals
- Effective in eliminating disinfection by-products (DBP) and other emerging contaminants

The improved surface properties and higher porosity of wood-based catalytic carbon enable more efficient adsorption and breakdown of persistent chemical compounds such as chloramines compared to regular activated carbon. This unique surface modification and larger pore diameters allow the carbon to operate effectively with shorter contact times, facilitating faster flow rates. Essentially, its modified surface and larger pore size accelerate chemical reduction and enhance its capacity to retain contaminants.

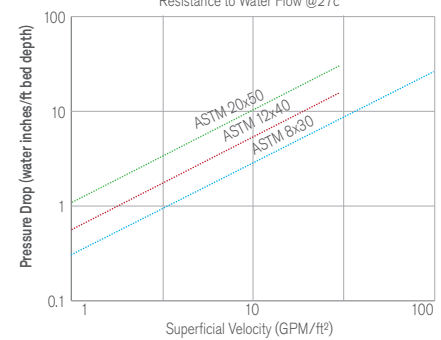
Chloramine Capacity & Catalytic Activity



Backwash Bed Expansion



Pressure Drop Curve
Resistance to Water Flow @27°C



PACKAGING Standard packaging is primarily designed to prevent the deterioration of accurately graded granules and to prevent the adsorption of moisture or atmospheric contaminants. Other packaging criteria can be accommodated upon request.

BULK BAG
Net. 500 kg

SACKS
Net. 25 kg

PE VALVE BAG
Net. 12.5 kg



'ACTIVATE' HAYCARB'S
ESG ROADMAP 2030

CONTACT US

HAYCARB USA INC, (USA)
TEL: +1 (855) HAYCARB
EMAIL: sales@haycarbusa.com
CANADA, UNITED STATES
OF AMERICA, SOUTH &
LATIN AMERICA

EUROCARB PRODUCTS
LIMITED (UK)
TEL: +44 1179 820333
EMAIL: info@eurocarb.com
UNITED KINGDOM AND
EUROPE

HAYCARB PLC (SRI LANKA)
TEL: +94 11 262 7000
EMAIL: inquiries@haycarb.com
GLOBAL COVERAGE

HAYCARB HOLDINGS (AUSTRALIA)
PTY LTD
TEL: +61 3 8555 0680
EMAIL: haycarb@haycarb.com.au
AUSTRALIA, NEW ZEALAND & PNG

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