

# HARMSCO®

# HAC

## Premium Carbon Cartridges

*Chlorine and Lead Reduction*

### Dual-stage Carbon Cartridges for Taste, Odor, Chlorine and Lead Reduction



This Component is Tested and Certified by NSF International against NSF/ANSI Standard 42 for material requirements only.  
COMPONENT

- High chlorine reduction
- Low initial pressure drop
- Increased contaminant removal
- No release of carbon fines
- High dirt holding capacity
- No channeling or bypass

### Features

- ▶ 100% coconut shell carbon
- ▶ Made from polyolefin filter media
- ▶ Dual stage depth filtration
- ▶ Heat fused inner layer
- ▶ 5-micron nominal filtration
- ▶ FDA approved components
- ▶ Radial flow design
- ▶ Available in a variety of sizes and flow rates



### Applications

- ▶ Commercial Drinking Water
- ▶ Marine/Aquatic Filtration
- ▶ Food & Beverage Filtration
- ▶ Industrial Water Filtration
- ▶ Point of Entry Residential Filtration
- ▶ Reverse Osmosis Pre-filtration
- ▶ Water Bottling Filtration
- ▶ Science/Laboratory



**HARMSCO® Filtration Products**



Made in USA

## Specifications

► **Filter Media:** Composite of pulverized activated carbon and polyolefin fibers bonded together with wet molding process and thermally bonded to eliminate channeling and media migration.

- **Temperature Limit:** 160°F (71°C)
- **Micron Rating:** 5 Nominal



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COMPONENT

## Cartridge Selection/Sizing Guide

### 2-3/4 and 4-1/2" O.D. 9-3/4" - 20" Premium Carbon Cartridges

Product Code	Type	Max Flow Rate (GPM)	Max Flow Rate (LPM)	Max Capacity Chlorine (Gals.)	Max Capacity (Gals.) Organic Chemicals	Max Capacity Lead (Gals.)	Length (in.)	O.D. (in.)	No./Case
HAC-10-W	Activated Carbon	1.5	5.7	5,000	500	—	9-3/4	2-3/4	24
HAC-20-W	Activated Carbon	3	11.3	10,000	1,000	—	20	2-3/4	24
HAC-BB-10-W	Activated Carbon	5	18.9	20,000	1,000	—	9-3/4	4-1/2	8
HAC-BB-20-W	Activated Carbon	10	37.8	40,000	2,000	—	20	4-1/2	4

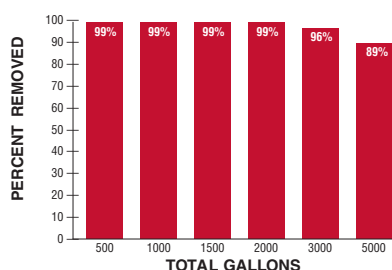
\* 99% lead removal typical with low pH and alkalinity to 4,000 gals. 98% to 92% removal typical with high pH and alkalinity to 3,000 gals. Data shown above is approximate and depends on filter life relative to solids content.

Note: Test data shown above is for HAC-10-W cartridge. Results may vary depending on water chemistry and other factors.

## Superior Performance

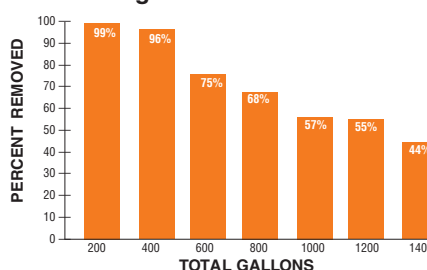
Harmsco's activated carbon cartridges outperform "canister" and "impregnated" types of cartridges due to their increased carbon content, cellulose-free construction, wet molding process and dual-stage construction. They have been tested by a certified national laboratory using test procedures described in NSF Standards 42 and 53. Test results are shown below:

### Chlorine Removal



Test data generated by independent laboratory at 1 gpm using test procedures described in NSF Standard 42. Average chlorine feed at 2 ppm.

### Organic Chemical Removal

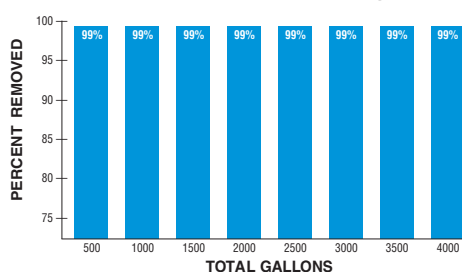


Test data generated by independent laboratory at 1 gpm using test procedures described in NSF Standard 53. TCE used as test contaminant at average feed of 300 ppb.

## Lead Removal and Performance

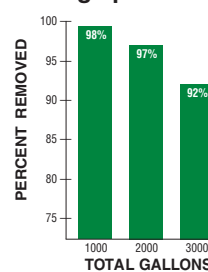
Harmsco's HAC-10-LR-W lead removal cartridges employ the use of a specially formulated ceramic lead removal matrix plus pulverized activated carbon to reduce lead concentrations up to 99% with very short contact time. The "ATS"™ adsorbent material works well in hard water and in the presence of iron and manganese. Performance is relatively unaffected by pH. They have been tested using the test protocol described in NSF Standard 53 and certified by an independent laboratory. The test results shown below indicate our HAC-10-LR-W lead removal cartridge will effectively reduce lead concentrations up to 99% for 4,000 gallons of low pH water and up to 92% for 3,000 gallons of high pH water.

### Low pH and Alkalinity



Test data generated by certified national laboratory using the protocol described in NSF Standard 53 using a flow rate of 0.75 gpm and an average feed of 150 ppb lead. Water's pH was 6.5 and alkalinity 10-30 ppm as CaCO<sub>3</sub>.

### High pH and Alkalinity



Test data generated by certified national laboratory using the protocol described in NSF Standard 53 using a flow rate of 0.75 gpm and an average feed of 150 ppb lead. Water's pH was 8.5 and alkalinity 170-250 ppm as CaCO<sub>3</sub>.

**Note:** This publication is to be used as a guide. The data within has been obtained from many sources and is considered to be accurate. Harmsco does not assume liability for the accuracy and/or completeness of this data. Changes to the data can be made without notification. Temperature, Pressure, Flow Rates, Differential Pressures, Chemical Combinations and other unknown factors can affect performance in unknown ways. **Limited Warranty:** Harmsco warrants their products to be free of material and workmanship defects. Determination of suitability of Harmsco products for uses and applications contemplated by Buyer shall be the sole responsibility of Buyer. The end user/installer/buyer shall be liable for the product's performance and suitability regarding their specific intended applications. End users should perform their own tests to determine suitability for each application.



**HARMSCO® Filtration Products**

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