

# Harmsco<sup>®</sup> Filter Cartridges

For Taste, Odor, Chlorine, Lead and  
Organic Chemical Removal



# Once Upon-A-Time No One Ever Questioned The Quality Of Our Drinking Water!

Years ago, our water supplies were crystal clear and no one questioned the quality of our drinking water. But this was before the industrial revolution, our expanded population growth and the urbanization of our society. Today, contamination from waste sites, factories, leaking fuel storage tanks, run-off from some of the chemicals used in farming, lead

from pipes and harmful chlorine by-products have seriously threatened the water we drink. However, foul tastes, odors, lead and harmful organic chemicals can be substantially removed by using filter cartridges from Harmsco Industrial Filters that contain specially formulated activated carbon and other adsorbent materials.

## Features...Activated Carbon Filter Cartridges by Harmsco®

### **Wet molding process...**

bonds high amounts of pulverized activated carbon with polyolefin filter media to provide increased pore volume, superior filtration and chlorine removal up to 99%.

### **Thermally bonded...**

outer layer eliminates channeling of sediment through the filter media, by-pass and migration.

### **Dual-stage depth filtration...**

with activated carbon and filter media for a cost effective approach to carbon treatment and sediment removal in a **single filter cartridge**.

### **Heat-fused inner layer...**

to trap carbon particles so they will not migrate downstream.

### **Five micron filtration...**

to assure high drinking water quality.

### **Cellulose-free construction...**

to provide added protection against bacteria degradation.

**Note:** Big-Blue (4-1/2" OD) and Lead Removal cartridges come with outer wrap between carbon media and netting for prefilter to carbon treatment.



### **Molded end caps...**

made of pliable PVC for excellent end sealing and knife-edge seal.

### **FDA approved components...**

to allow use in potable water and liquid food applications.

### **Individually shrink wrapped...**

to retain adsorption capabilities.

### **Polyolefin outer netting...**

for integrity and improved appearance.

### **Polypropylene inner core...**

for added strength and support.

### **Substantially removes:**

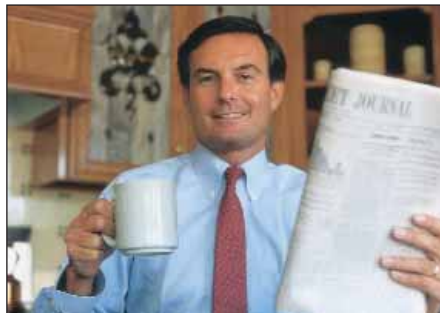
- Chlorine
- Organic chemicals
- Lead\*
- Bad tastes
- Foul odors
- Turbidity
- Sediment
- Rust particles

\*With lead-removal cartridge.

## Benefits...



**Improved drinking water quality for you and your family!**



**Better tasting coffee, tea and other beverages made with water.**



**Crystal clear water with sediment, rust and other particles removed.**

## Codices and Types and Dimensions

We offer a complete line of filter cartridges containing activated carbon for improved water quality. Select from the products described below:

Product Code	Type	Size (L x OD)
HAC-10-W	Activated carbon	9¾" x 2¾"
HAC-20-W	Activated carbon	20" x 2¾"
HAC-10-LR-W	A/C +Lead removal	9¾" x 2¾"
HAC-BB-10-W	Activated carbon	9¾" x 4½"
HAC-BB-20-W	Activated carbon	20" x 4½"

Note: All center tubes are 1½" ID.



Lead removal, Big-Blue and standard carbon cartridges.

## Specifications

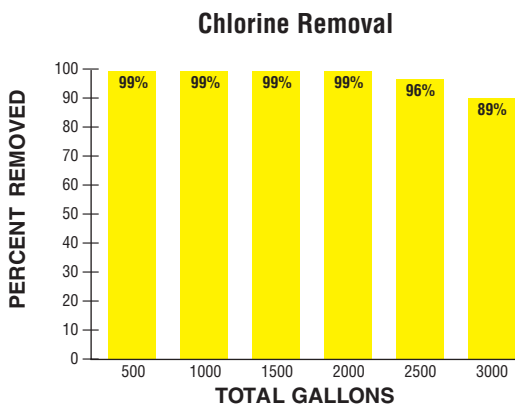
<b>Filter Media:</b>	Composite of pulverized activated carbon and polyolefin fibers bonded together with wet molding process and thermally bonded to eliminate channeling and media migration.					
<b>Micron Rating:</b>	5 Nominal					
<b>Temperature Limit (max.):</b>	160°F (70°C)					
Product Codes	No./Case	Max Flow Rates		Maximum Capacity (Gals)		
		GPM	LPM	Chlorine	Organic Chemicals	Lead
HAC-10-W	24	1.5	5.7	3,000	500	—
HAC-20-W	24	3.0	11.3	6,000	1,000	—
HAC-10-LR-W	24	0.75	2.8	3,000	500	4,000*
HAC-10-BB-W	8	5.0	18.9	7,500	1,000	—
HAC-20-BB-W	4	10	37.8	15,000	2,000	—

\*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 are approximate and depend on filter life relative to solids content.

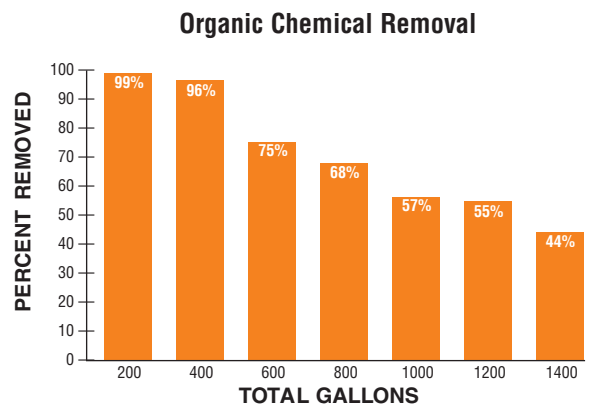
## Superior Performance

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.

Harmsco's activated carbon cartridges have been tested by a certified national laboratory using test procedures described in NSF Standards 42 and 53. Test results are shown below:



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



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.

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



## Lead Removal

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"<sup>TM</sup> adsorbent material works well in hard water and in the presence of iron and manganese. Performance is relatively unaffected by pH.

Harmsco lead removal cartridges fit standard single filter housings.



Harmsco whole house filter and activated carbon filter cartridges.

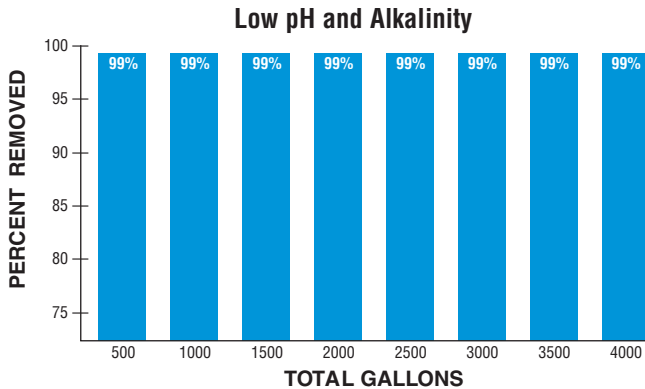
## Whole House Filtration

Whole house filtration is easy using a Harmsco Up-Flow filter housing and activated carbon cartridges. (See right.)

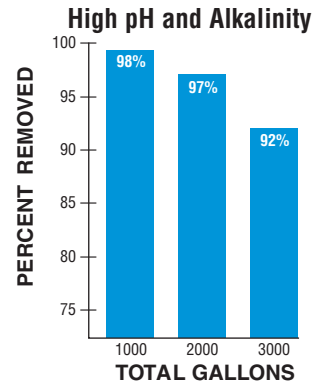
## Superior Performance

Harmsco's lead removal cartridges 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 in high pH water.

### Lead Removal



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>.



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



## Harmsco Filter Cartridges for Sediment Removal

We make a complete line of pleated filter cartridges to remove sediment, rust particles and turbidity. Select from seven micron ratings and six standard lengths.

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