



Jim Doyle, Governor
Cory L. Nettles, Secretary

December 11, 2003

CULLIGAN INTERNATIONAL
BETH HUPP
ONE CULLIGAN PARKWAY
NORTHBROOK IL 60062

ACE HARDWARE CORPORATION
BETH HUPP
2375 SANDERS ROAD
NORTHBROOK IL 60062-6209

Re: Description: WATER TREATMENT DEVICE-ACTIVATED CARBON
Manufacturer: ACE HARDWARE CORPORATION
Product Name: ACE UNDER SINK DRINKING WATER FILTER
Model Number(s): 4158515 USING THE 48167 CARTRIDGE
Product File No: 20030125

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters Comm 82 through 84, Wisconsin Administrative Code, and Chapters 145 and 160, Wisconsin Statutes.

The Department hereby issues an approval based on the Wisconsin Statutes and the Wisconsin Administrative Code. This approval is valid until the end of December 2008.

This approval is contingent upon compliance with the following stipulation(s):

- This product has undergone sufficient testing to document the product's ability to reduce only those contaminants and/or substances as specified in this approval letter when the product is installed and maintained in strict accordance with the manufacturers published instructions.
- For buildings not served by a municipal water supply, Department of Natural Resources (DNR) written approval may be required prior to installation of this product in a water supply system to reduce the concentration of a contaminant that exceeds the primary drinking water standards contained in ch. NR 809, Wis. Admin. Code, the enforcement standards contained in ch. NR 140, Wis. Admin. Code, or for a water supply system that is subject to a written advisory opinion by the DNR. For more information contact the DNR Section of Private Water Systems, P.O. Box 7921, Madison, WI 53707, telephone (608) 266-3415.
- If these approved devices are modified or additional assertions of function or performance are made, then this approval shall be considered null and void, unless the change is submitted to the department for review and the approval is reaffirmed.

Based on testing data submitted to and reviewed by the department, this approval recognizes that these plumbing products will reduce the concentration of contaminants as specified on pages 1 through 3 of this letter.

AESTHETIC CONTAMINANT REDUCTION CAPABILITIES
PRODUCT FILE NUMBER 20030125
TABLE 1 OF 4

Flow Rate: 2.3 liters (l) [0.6 gallon per minute (gpm)]
Capacity: 2,271 liters (l) [600 gallons (gals.)], for particulate reduction, for all models, the capacity is dependent on the type and quantity of particulate matter present in the untreated water; the need for maintenance may be indicated by a significant decrease in flow rate.

Tested Contaminant	Influent Challenge (mg/l)*, 1
Chlorine (free)	2.0 ± 10%
Particulates (0.5 to < 1.0 µm)	≥ 1.0 x 10 ⁴ #/ml

Other Conditions: the contaminant reduction performance capabilities displayed for Table 1 of 4 were verified by testing conducted in accordance with NSF *International* Standard 42. To qualify for free chlorine reduction, the device must reduce the influent challenge concentrations by ≥ 75%; meeting the free chlorine reduction requirements also qualifies the device for the reduction of aesthetic, organic, taste and odor reduction (e.g. geosmin, methylisoborneol); this does not include hydrogen sulfide. To qualify for particulate reduction (Class I) the device must reduce the influent challenge concentrations by ≥ 85%.

1 = milligrams per liter (mg/l) are equivalent to parts per million (ppm)
 ≥ = greater than or equal to
 ± = plus or minus
 #/ml = particles per milliliter

< = less than
 µm = micrometers
 * = unless otherwise specified
 ≤ = less than or equal to

HEALTH EFFECTING INORGANIC CONTAMINANT REDUCTION CAPABILITIES
PRODUCT FILE NUMBER 20030125
TABLE 2 OF 4

Flow Rate: 2.3 liters (l) [0.6 gallon per minute (gpm)]
Capacity: 2,271 liters (l) [600 gallons (gals.)], for asbestos reduction, the capacity is dependent on the type and quantity of particulate matter present in the untreated water; the need for maintenance may be indicated by a significant decrease in flow rate.

Tested Contaminant	Influent Challenge Concentration (mg/l) ¹
Asbestos fibers (> 10 µm in length)	1.0 x 10 ⁷ to 1.0 x 10 ⁸ F/l
Lead (Pb ⁺²) ²	0.15 ± 10%
Mercury (Hg ⁺²) ²	0.006 ± 10%

Other Conditions: the contaminant reduction performance capabilities displayed for Table 2 of 4 were verified by testing conducted in accordance with NSF *International* Standard 53. To qualify for asbestos reduction, the device must reduce the influent challenge concentrations by ≥ 99%. To qualify for lead reduction, the device must reduce the influent challenge concentrations such that all effluent concentrations are ≤ 0.010 mg/l. To qualify for mercury reduction, the device must reduce the influent challenge concentrations such that all effluent concentrations are ≤ 0.002 mg/l.

1 = milligrams per liter (mg/L) are equivalent to parts per million (ppm)
 * = unless otherwise specified
 ± = plus or minus

2 = metals are tested at pH 6.5 and pH 8.5
 ≤ = less than or equal to
 F/l = fibers per liter

HEALTH EFFECTING BIOLOGICAL CONTAMINANT REDUCTION CAPABILITIES
PRODUCT FILE NUMBER 20030125
TABLE 3 OF 4

Flow Rate: 2.3 liters (l) [0.6 gallon per minute (gpm)]
Capacity: dependent on the type and quantity of particulate matter present in the untreated water; the need for maintenance may be indicated by a significant decrease in flow rate.

Tested Contaminant	Influent Challenge (#/ml)
Cysts/Oocysts ¹	$\geq 5.0 \times 10^4$

Other Conditions: the contaminant reduction performance capabilities displayed for Table 3 of 4 were verified by testing conducted in accordance with NSF *International* Standard 53. To qualify for cyst/oocyst reduction, the device must reduce the influent challenge concentrations by $\geq 99.95\%$ at each sample point.

¹ = the specific organisms covered under this testing protocol include cryptosporidium parvum, entamoeba histolytica, giardia lamblia and toxoplasma gondii
ml = particles per milliliter \geq = greater than or equal to

HEALTH EFFECTING ORGANIC CONTAMINANT REDUCTION CAPABILITIES
PRODUCT FILE NUMBER 20030125
TABLE 4 OF 4

Flow Rate: 2.3 liters (l) [0.6 gallon per minute (gpm)]
Capacity: 2,271 liters (l) [600 gallons (gals.)]

Tested Contaminant	Influent Challenge Concentration ($\mu\text{g/l}$) ¹
Atrazine	$9.0 \pm 10\%$
Lindane	$2.0 \pm 10\%$

Other Conditions: the contaminant reduction performance capabilities displayed for Table 4 of 4 were verified by testing conducted in accordance with NSF *International* Standard 53. To qualify for atrazine reduction, the device must reduce the influent challenge concentrations such that all effluent concentrations are $\leq 3.0 \mu\text{g/l}$. To qualify for lindane reduction, the device must reduce the influent challenge concentrations such that all effluent concentrations are $\leq 0.2 \mu\text{g/l}$.

¹ = micrograms per liter ($\mu\text{g/l}$) are equivalent to parts per billion (ppm) \leq = less than or equal to
 \pm = plus or minus

This device was tested under controlled laboratory, or field, conditions. The actual performance of this device for a specific end use installation will vary from the tested conditions based on local factors such as water pressure, water temperature and water chemistry.

The department is in no way endorsing this product or any advertising, and is not responsible for any situation that may result from its use.

Sincerely,

Glen W. Schlueter
Engineering Consultant-Plumbing Product Reviewer
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Safety and Buildings Division
Department of Commerce
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