



Jim Doyle, Governor
Cory L. Nettles, Secretary

June 23, 2004

OASIS CORPORATION
DOUGLAS SHIPE
265 N HAMILTON RD
COLUMBUS OH 43213

WHIRLPOOL CORPORATION
DAVID E. SHEPERD
2000 M-63 N
BENTON HARBOR MI 49022

Re: Description: WATER TREATMENT DEVICE-ACTIVATED CARBON
Manufacturer: WHIRLPOOL CORPORATION
Product Name: ULTRAEASE FILTRATION
Model Number(s): WHAF-0335AB USING THE WHAB-6009 AND WHAB-6010 CARTRIDGES
Product File No: 20040288

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 June 2009.

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 this approved device is 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.
- The WHAF-0335AB model, using the WHAB-6009 and WHAB-6010 cartridges, must be installed along with the flow monitoring device.
- If the "DirectHot" unit is installed along with this filtration device, then the outlet tubing of the "DirectHot" unit must conform to at least one of the standards listed in Table 84.30-8 of ch. Comm 84.30 (4) (e) of the Wisconsin Administrative Code and have a minimum working pressure of 100 psig at 180 degrees F.
- If the "DirectChill" and/or "DirectHot" peripheral devices are used in conjunction with this filtration device, then the power supply to these peripheral devices must be served by a ground fault circuit interrupter (GFCI) outlet.

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

The Ultra Ease Filtration model WHAF-0335AB consists of the WHAB-6009 and WHAB-6010 cartridges used together in series. Each cartridge is installed into an individual "filterhead" valve.

**AESTHETIC CONTAMINANT REDUCTION CAPABILITIES
 PRODUCT FILE NUMBER 20040288
 TABLE 1 OF 4**

Flow Rate: 2.3 liters (l) [0.6 gallon per minute (gpm)]
Capacity: 4,543 liters (l) [1,200 gallons (gals.)] for free chlorine reduction. For particulate 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 (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

**HEALTH EFFECTING INORGANIC CONTAMINANT REDUCTION CAPABILITIES
 PRODUCT FILE NUMBER 20040288
 TABLE 2 OF 4**

Flow Rate: 2.3 liters (l) [0.6 gallon per minute (gpm)]
Capacity: 4,543 liters (l) [1,200 gallons (gals.)] for lead reduction. 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%

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.

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

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 20040288
TABLE 4 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 influent 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 4 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
 \geq = greater than or equal to
#/ml = particles per milliliter

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
Bureau of Integrated Services
Safety and Buildings Division
Department of Commerce
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GWS:gws