



July 3, 2003

PENTAIR WATER TREATMENT  
PLYMOUTH PRODUCTS  
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SHEBOYGAN WI 53082-1047

U.S. FILTER  
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Re: Description: WATER TREATMENT DEVICE-REVERSE OSMOSIS  
Manufacturer: U.S. FILTER  
Product Name: ADVANCED REVERSE OSMOSIS DRINKING WATER SYSTEM  
Model Number(s): RO-3000 USING ROM-230T MEMBRANE  
Product File No: 20030188

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 July 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.
- A device used to detect increases in the total dissolved solids concentration must be installed on the product water line.
- 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.

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.

**INORGANIC CONTAMINANT REDUCTION CAPABILITIES  
 PRODUCT FILE NUMBER 20030188  
 TABLE 1 OF 2**

**Production Rate:** 28.8 liters per day (lpd) [7.6 gallons per day (gpd)]

Tested Contaminant	Influent Challenge Concentration (mg/l) <sup>1</sup>	Max. Permissible Effluent Concentration (mg/l) <sup>1</sup>
Ammonia (NH <sub>4</sub> )	3.3	0.6 <sup>†</sup>
Chlorine (free) <sup>4</sup>	2.0 ± 10%	1.0
Copper (Cu <sup>+2</sup> ) <sup>2</sup>	3.0 ± 10%	1.3
Fluoride (F <sup>-1</sup> )	8.0 ± 10%	1.5
Lead (Pb <sup>+2</sup> ) <sup>2</sup>	0.15 ± 10%	0.010
Magnesium (Mg <sup>+2</sup> )	29.0	0.1 <sup>†</sup>
Selenium (Se <sup>+4</sup> and Se <sup>+6</sup> ) <sup>2</sup>	0.10 ± 10%	0.05
Sulfate (SO <sub>4</sub> <sup>-2</sup> ) <sup>5</sup>	760	7.0 <sup>†</sup>
Total Dissolved Solids (NaCl)	750 ± 40	187
Tannin (C <sub>76</sub> H <sub>52</sub> O <sub>4</sub> )	3.7	2.0 <sup>†</sup>
Zinc (Zn <sup>+2</sup> )	10.2	0.05 <sup>†</sup>

**Other Conditions:** the contaminant reduction performance capabilities displayed for Table 1 of 2 were verified by testing conducted in accordance with NSF *International* Standard 58. To qualify for a specific contaminant reduction claim, the system shall reduce the influent challenge concentration so that the arithmetic mean of all effluent sample results, and 90% of the individual effluent samples, are ≤ the maximum permissible effluent concentration. The D-20 post-filter was tested for free chlorine reduction in accordance with NSF standard 42, to qualify for free chlorine reduction, the system must reduce the influent challenge concentrations by ≥ 50%. The data qualifying this device for ammonia, magnesium, sulfate, tannin and zinc reduction performance were generated by testing conducted by U.S. Filter – Plymouth Products in accordance with the generalized testing protocol contained in NSF Standard 58.

- 1 = milligrams per liter (mg/l) are equivalent to parts per million (ppm)
- 2 = metals are tested at pH 6.5 and pH 8.5
- 4 = free chlorine reduction testing performed on the "D-20" post-filter
- 5 = tested independently of NSF Standard 58
- \* = unless otherwise specified
- ≤ = less than or equal to
- ± = plus or minus
- † = average effluent concentration

**BIOLOGICAL CONTAMINANT REDUCTION CAPABILITIES  
 PRODUCT FILE NUMBER 20030188  
 TABLE 2 OF 2**

**Production Rate:** 28.8 liters per day (Lpd) [7.6 gallon per day (gpd)]

Tested Contaminant	Influent Challenge (#/ml)
Cysts/Oocysts <sup>1</sup>	≥ 5.0 x 10 <sup>4</sup>

**Other Conditions:** the contaminant reduction performance capabilities displayed for Table 2 of 2 were verified by testing conducted in accordance with NSF *International* Standard 58. To qualify for cyst/oocyst reduction, the device must reduce the influent challenge concentrations by ≥ 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
- ≥ = greater than or equal to

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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