



June 26, 2014

CULLIGAN INTERNATIONAL
YE LIU
9399 W. HIGGINS ROAD, STE 1100
ROSEMONT IL 60018

Re: Description: WATER TREATMENT DEVICE - SOFTENER/CATION EXCHANGE
Manufacturer: CULLIGAN INTERNATIONAL
Product Name: HIGH EFFICIENCY SOFTENER CLEAR WATER CONDITIONER
Model Number(s): 9-INCH, 10-INCH, 12-INCH AND 14-INCH
Product File No: 20140174

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters SPS 382 through 384, 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 2019.

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 manufacturer's published instructions.
- Where the Department of Natural Resources (DNR) has jurisdiction, a 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) 267-9787.
- 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.
- These cation exchange water softeners shall be sized, installed, programmed and maintained such that wastewater volumes, total dissolved solids and chloride discharges are minimized.
- The department does not recommend the use of water softeners for reducing dissolved iron concentrations in excess of 3.0 mg/l. This is because applying water softeners in this way sacrifices long-term water softener performance and efficiency. The use of water softeners for reducing dissolved iron concentrations exceeding 3.0 mg/l also generates excessive, and otherwise avoidable, quantities of chloride and dissolved solids which are subsequently discharged to ground and/or surface water supplies. Once present in ground and/or surface water supplies, chloride and dissolved solids tend to remain in the water resource and may travel great distances from the original point source. Presently, there are no economically viable methods to remove chloride and dissolved solids from water supplies because available technologies generate waste streams of their own, further concentrating the problem. It has been established by the Wisconsin Department of Natural Resources that chloride is chronically toxic to representative aquatic organisms, including forage and sport fish, at 395 mg/l, and acutely toxic at 757 mg/l.

- These devices are not approved for the reduction of bacterial, colloidal or organically bound forms of iron.

The water must be tested to speciate the iron present to determine if these devices can provide adequate treatment.

- At the time of installation, these devices shall be provided with an effective means to warn the users when they are not performing their function. This shall be accomplished by one of the following:
 1. sounding and alarm or flashing a light, each connected to an acceptable power source;
 2. providing a sampling kit for analysis of hardness or other appropriate contaminants; or
 3. providing a hardness monitor.

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 2 of this letter.

**WATER SOFTENING CAPABILITIES
 PRODUCT FILE NUMBER 20140174
 TABLE 1 OF 1**

Model Numbers	Capacity*						Flow Rate vs. Pressure Loss
	Rating 1		Rating 2		Rating 3		
Cleer Water	Grains	Pounds	Grains	Pounds	Grains	Pounds	gpm @ psig
9-inch	17,845	4.0	27,108	8.0	31,736	12.0	9.0 @ 11.0
10-inch	26,781	6.0	40,662	12.0	47,604	18.0	9.4 @ 12.0
12-inch	31,352	7.0	48,458	16.0	59,267	24.0	10.0 @ 10.0
14-inch	51,726	12.0	75,582	24.0	88,549	36.0	10.6 @ 11.0

* The softener capacity rating is based on grains of hardness, due to calcium and magnesium cations, removed (as calcium carbonate) while producing soft water between successive regenerations and is related to the pounds of salt required for each regeneration. The tests run to generate the data for table 1 of 1 were conducted in accordance with NSF Standard 44 and performed by the Water Quality Association (WQA). This device is also approved for the reduction of up to 10.0 mg/l dissolved iron; the testing/rationale to support the dissolved iron reduction claim was provided by the national WQA in Lisle, IL. This device is efficiency rated (ER) at the lowest salt dosages displayed (i.e. "Rating 1"). Studies conducted on sulfonated poly-styrene di-vinyl benzene (SSDVBC) cation exchange media have documented that if hardness is reduced to less than 1.0 grain per gallon (17.1 mg/l), then barium and radium will also be effectively reduced. Thus, the capacity of these device for reducing barium and/or radium are based on the hardness reduction capacity ratings displayed above.

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 which may result from its use.

Sincerely,

Glen W. Schlueter
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 Bureau of Technical Services
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