SAFETY AND BUILDINGS DIVISION
Plumbing Product Review
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TTY: Contact Through Relay

Scott Walker, Governor
Dave Ross, Secretary

August 9th, 2011

WATER QUALITY ASSOCIATION
PRODUCT CERTIFICATION
THOMAS PALKON
4151 NAPERVILLE RD
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HAGUE QUALITY WATER, INTERNATIONAL
CHRIS HUGHES
4343 S HAMILTON RD
GROVEPORT OH 43125

Re: Description: WATER TREATMENT DEVICE - POE SOFTENER
Manufacturer: HAGUE QUALITY WATER, INTERNATIONAL
Product Name: HAGUE WATER SOFTENERS
Model Number(s): 52 AMQ AND 62 AMQ
Product File No: 20110222

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 August 2016.

This approval supersedes the approval issued on July 7th, 2006 under product file number 20040552.

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.

- When treating water for regulated contaminants no bypass piping, integral to the device or otherwise, is permitted.

  If these devices are installed for the purposes of barium and/or radium reduction, then both the blending and bypass valves shall be maintained in the fully closed position at all times. Both the blending and bypass valves shall be permanently disabled in a manner that precludes the bypass of untreated water.

  For the blending valve, it is suggested the valve be set fully counterclockwise and the screwdriver slot removed either by filling the slot with a compatible filling material (e.g. Loctite®) or destroying it with a drill bit. For the bypass valve, the valve be placed fully in the service position and then the self-tapping screw in the blue handle removed and disposed of.

- These cation exchange water softeners shall be sized, installed, programmed and maintained such that wastewater volumes, total dissolved solids and chloride discharges are minimized.

- 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.

- Operation of these devices at flow rates above the rated service flow rates specified within this approval letter are not supported or acknowledged by this approval. The rated service flow rates are the flow rates at which these devices were tested.

  Because the level of treatment obtained is, in part, a function of how long the water is in contact with the treatment media within these devices, arbitrary increases in the flow rates above the rated service flow rates may compromise the quality of the treated water.

- 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.

- This filter is approved as a bacteriostatic device.

  "Bacteriostatic" means that the filtration media within this device will not support the growth of naturally occurring bacteria. This means that under actual test conditions the number of naturally occurring bacteria coming out of the tested filter was not greater than the number of naturally occurring bacteria entering the filter.

  This does not, in any way, mean that this device will make microbiologically unsafe water safe to consume. This does not mean that this device will kill or otherwise inactivate disease causing microorganisms.

- 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.

- These devices shall not be installed on water supplies with a pH of 6.5 or less.

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.

WATER SOFTENING CAPABILITIES
PRODUCT FILE NUMBER 20110222
TABLE 1 OF 1

Model Numbers	Capacity*								Max. Rated Service Flow
Metered	Rating 1		Rating 2		Rating 3		Rating 4		
WaterMax	Grains	Pounds	Grains	Pounds	Grains	Pounds	Grains	Pounds	gpm @ psig
52AMQ	5,700	1.1	12,000	2.7	23,400	6.2	30,600	9.3	8 @ 9
62AMQ	5,700	1.1	12,000	2.7	23,400	6.2	30,600	9.3	8 @ 9

Softener capacity ratings are based on grains of hardness, due to calcium and magnesium cations, removed (as calcium carbonate) while producing soft water between successive regenerations and are related to the pounds of salt required for each regeneration. The tests run to generate the hardness reduction data for table 1 were conducted in accordance with NSF Standard 44. 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 is efficiency rated (ER) at the lowest salt dosages displayed for each model (i.e. “Rating 1”).

These devices are approved for the reduction of dissolved iron, up to a maximum concentration of 12.0 mg/l. The tests run to support the dissolved iron reduction claim were conducted by the Water Quality Association (WQA).

These devices are approved for a nominal 20 micrometer (μm) particulate reduction rating.

These devices contain a metallic media comprised primarily of copper and zinc.

This media will release copper and zinc into the treated water as byproducts of performing the intended function of contaminant reduction. How much copper and zinc is released into the treated water is primarily a function of water chemistry, particularly the pH.

However, it's also important to note that, based on the test data submitted for these devices, the copper and zinc concentrations in the treated water are well bellow any primary or secondary maximum contaminant levels respectively. Thus, the concentration of copper and zinc in the water treated by this device should not cause any adverse health effects in otherwise healthy individuals.

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
Engineering Consultant-Plumbing Product Reviewer
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Safety and Buildings Division
Department of Safety and Professional Services
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