SAFETY AND BUILDINGS DIVISION
Plumbing Product Review
P.O. Box 2658
Madison, Wisconsin 53701-2658

commerce.wi.gov
Wisconsin
Department of Commerce

Jim Doyle, Governor
Mary P. Burke, Secretary

May 17, 2007

CUNO ENGINEERED PRODUCTS
PAUL MUELLER
3160 LEXINGTON AVE S
EAGAN MN 55121

EMERSON ELECTRIC
IN-SINK-ERATOR
LORI BERNHARDT
4700 21ST ST.
RACINE WI 53406

Re: Description: WATER TREATMENT DEVICE-ACTIVATED CARBON
Manufacturer: EMERSON ELECTRIC
Product Name: INSINKERATOR F-201 SYSTEM
Model Number(s): F-201 USING THE F-601R CARTRIDGE
Product File No: 20070103

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 May 2012.

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.

- 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) 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.

- These devices will only reduce the concentration of volatile organic chemicals at water outlets that are served by the devices. There are dermal (skin) absorption and inhalation exposure risks associated with volatile organic chemicals. Therefore, using point-of-use devices such as these will not protect all routes of potential exposure. Potentially hazardous exposures to volatile organic chemicals will remain possible at unprotected outlets, particularly hot water outlets (e.g. bathing, showering, clothes washing or dish washing).

  If, by way of reputable water analyses, a water supply is known to contain unsafe levels of volatile organic chemicals, then all the water entering the residence must be treated at the point-of-entry using an approved water treatment device to address all potential routes of exposure.

- These devices will only reduce the concentration of cysts/oocysts at water outlets that are served by the devices. Therefore, using point-of-use devices such as these will not protect all routes of potential exposure. Potentially hazardous exposures to cysts/oocysts will remain possible at unprotected outlets.

  The presence of cysts/oocysts strongly suggests that other pathogens (e.g. bacteria, virus) may also be present.

  If, by way of reputable water analyses, a water supply is known to contain cysts/oocysts, then all the water entering the residence must be treated at the point-of-entry, using an approved water treatment device, to address all potential routes of exposure thereby providing a biologically safe water supply.

- If the treatment components of this device (e.g., replacement cartridge) are replaced with anything other than those originally approved for use with this device, then this approval shall immediately be considered null and void.

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.

AESTHETIC CONTAMINANT REDUCTION CAPABILITIES
PRODUCT FILE NUMBER 20070103
TABLE 1 OF 4

Flow Rate: 2.8 liters per minute (lpm) [0.75 gallon per minute (gpm)]
Capacity: 1,893 liters (l) (500 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 be 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 ≥ 50%; 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 20070103
TABLE 2 OF 4

Flow Rate: 2.8 liters per minute (lpm) [0.75 gallon per minute (gpm)]
Capacity: 1,893 liters (l) (500 gals.) for free chlorine 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 be a significant decrease in flow rate.

Tested Contaminant	Influent Challenge Concentration (mg/l*)[1]
Asbestos fibers (> 10 μm in length)	1.0×10^7 to 1.0×10^8 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 ORGANIC CONTAMINANT REDUCTION CAPABILITIES
PRODUCT FILE NUMBER 20070103
TABLE 3 OF 4

Flow Rate: 2.8 liters per minute (lpm) [0.5 gallon per minute (gpm)]
Capacity: 1,893 liters (l) (500 gals.)

Tested Contaminant	Influent Challenge (μg/l)[1]
Atrazine	9.0 ± 10%
Benzene	15.0 ± 10%
Carbofuran	80 ± 10%
Lindane	2.0 ± 10%
p-Dichlorobenzene	225 ± 10%
2,4-D	210 ± 10%

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 alachlor reduction, the device must reduce the influent challenge concentrations such that all effluent concentrations are ≤ 2.0 μg/l. To qualify for atrazine reduction, the device must reduce the influent challenge concentrations such that all effluent concentrations are ≤3.0 μg/l. To qualify for benzene reduction, the device must reduce the influent challenge concentrations such that all effluent concentrations are ≤ 5.0 μg/l. To qualify for carbofuran reduction, the device must reduce the influent challenge concentrations such that all effluent concentrations are ≤ 40 μg/l. To qualify for lindane reduction, the device must reduce the influent challenge concentrations such that all effluent concentrations are ≤ 0.2 μg/l. To qualify for p-dichlorobenzene reduction, the device must reduce the influent challenge concentrations such that all effluent concentrations are ≤ 75 μg/l.

(continued from page 3 of 4)

To qualify for 2,4-D reduction, the device must reduce the influent challenge concentrations such that all effluent concentrations are ≤ 70 μg/l.

1 = micrograms per liter (μg/l) are equivalent to parts per billion (ppb) **±** = plus or minus
≤ = less than or equal to

HEALTH EFFECTING BIOLOGICAL CONTAMINANT REDUCTION CAPABILITIES
PRODUCT FILE NUMBER 20070103
TABLE 4 OF 4

Flow Rate: 2.8 liters per minute (lpm) [0.5 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]	≥ 5.0×10^4

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 ≥ 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
≥ = 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 which 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
(608) 267-1401 **Phone**
(608) 267-9566 **Fax**
gschlueter@commerce.state.wi.us **Email**
8:00AM – 4:30PM CDT **Work Hours**

GWS:gws