



**Jim Doyle, Governor**  
**Mary P. Burke, Secretary**

September 11, 2006

KINETICO INCORPORATED  
SHARI GENSKE  
10845 KINSMAN RD.  
PO BOX 193  
NEWBURY OH 44065

Re: Description: WATER TREATMENT DEVICE-REVERSE OSMOSIS  
Manufacturer: KINETICO INCORPORATED  
Product Name: KINETICO  
Model Number(s): KINETICO DRINKING WATER SYSTEM PLUS VX DELUXE  
Product File No: 20060403

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 September 2011.

This approval supersedes the approval issued on October 20, 2003 under product file number 20030338.

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.

- In addition to the product water quality monitor specified elsewhere in this letter, this device shall be provided with one of the following means to warn the user when the system is not performing its function:
  1. a nitrate/nitrite monitor on the product water stream; or
  2. a sampling and analysis kit for nitrate/nitrite with explicit instructions of recommended frequency of analysis.
- 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 5 of this letter.

**HEALTH EFFECTING INORGANIC CONTAMINANT REDUCTION CAPABILITIES  
 PRODUCT FILE NUMBER 20060403  
 TABLE 1 OF 4**

**Product Water Production Rate:** Standard storage tank = 75.0 liters per day (lpd) [19.8 gallons per day gpd])  
 1.0 Gallon QuickFlo storage tank = 122.6 lpd (32.4 gpd)  
 3.0 Gallon QuickFlo storage tank = 134.4 lpd (35.5 gpd)

Tested Contaminant	Tested Influent Concentration (mg/l) <sup>1</sup>
Arsenic (As <sup>+5</sup> )	0.30 ± 10%
Barium (Ba <sup>+2</sup> )	10.0 ± 10%
Cadmium (Cd <sup>+2</sup> )	0.03 ± 10%
Copper (Cu <sup>+2</sup> ) <sup>†</sup>	3.0 ± 10%
Fluoride (F <sup>-1</sup> )	8.0 ± 10%
Hexavalent Chromium (Cr <sup>+6</sup> )	0.15 ± 10%
Lead (Pb <sup>+2</sup> )	0.15 ± 10%
Mercury (Hg <sup>+2</sup> )	0.006 ± 10%
Nitrate (NO <sub>3</sub> <sup>-</sup> )	27.0 ± 10%
Nitrite (NO <sub>2</sub> <sup>-</sup> )	3.0 ± 10%
Radium 226/228 ( <i>barium surrogate</i> )	25 pCi/L
Selenium (Se <sup>+4</sup> and Se <sup>+6</sup> )	0.10 ± 10%
Trivalent chromium (Cr <sup>+3</sup> )	0.15 ± 10%

**Other conditions:** the contaminant reduction capabilities displayed for table 1 of 4 were generated by testing conducted in accordance with NSF *International Standard 58*. To qualify for arsenic reduction, the device must reduce the influent challenge concentrations such that all effluent concentrations are ≤ 0.010 mg/l. To qualify for barium reduction, the device must reduce the influent challenge water concentrations such that all effluent concentrations are ≤ 2.0 mg/l. To qualify for cadmium reduction, the device must reduce the influent challenge concentrations such that all effluent concentrations are ≤ 0.005 mg/l. To qualify for copper reduction, the device must reduce the influent challenge water concentrations such that all effluent concentrations are ≤ 1.3 mg/l.

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To qualify for fluoride reduction, the device must reduce the influent challenge concentrations such that all effluent concentrations are  $\leq 1.5$  mg/l. To qualify for chromium reduction (i.e. trivalent or hexavalent), the device must reduce the influent challenge concentrations such that all effluent concentrations are  $\leq 0.1$  mg/l. To qualify for lead reduction, the device must reduce the influent challenge concentrations such that all effluent concentrations are  $\leq 0.010$  mg/l. To qualify for mercury reduction, the device must reduce the influent challenge concentrations such that all effluent concentrations are  $\leq 0.002$  mg/l. To qualify for nitrate/nitrite reduction, the device must reduce the influent challenge water concentrations, such that all effluent concentrations are  $\leq 10.0$  mg/l (as N), also, no more than 1.0 mg/l (as N) shall be in the form of nitrite. To qualify for radium reduction, the device must reduce the influent barium challenge concentrations such that all effluent concentrations are  $\leq 2.0$  mg/l (barium is used as a surrogate based on its relationship with radium on the periodic table and the difficulty in using radium for routine testing). To qualify for selenium reduction, the device must reduce the influent challenge concentrations such that all effluent concentrations are  $\leq 0.05$  mg/l.

1 = milligrams per liter (mg/l) are equivalent to parts per million (ppm)  
 $\pm$  = plus or minus  
 $\leq$  = less than or equal to  
 \* = unless otherwise indicated

**HEALTH EFFECTING BIOLOGICAL CONTAMINANT REDUCTION CAPABILITIES  
 PRODUCT FILE NUMBER 20060403  
 TABLE 2 OF 4**

**Product Water Production Rate:** Standard storage tank = 75.0 liters per day (lpd) [19.8 gallons per day (gpd)]  
 1.0 Gallon QuickFlo storage tank = 122.6 lpd (32.4 gpd)  
 3.0 Gallon QuickFlo storage tank = 134.4 lpd (35.5 gpd)

Tested Contaminant	Influent Challenge (#/ml)
Cysts/Oocysts <sup>1</sup>	$\geq 5.0 \times 10^4$

**Other Conditions:** the contaminant reduction performance capabilities displayed for Table 2 of 4 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  $\geq 99.95\%$  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

**AESTHETIC INORGANIC CONTAMINANT REDUCTION CAPABILITIES  
 PRODUCT FILE NUMBER 20060403  
 TABLE 3 OF 4**

**Product Water Production Rate:** Standard storage tank = 75.0 liters per day (lpd) [19.8 gallons per day (gpd)]  
 1.0 Gallon QuickFlo storage tank = 122.6 lpd (32.4 gpd)  
 3.0 Gallon QuickFlo storage tank = 134.4 lpd (35.5 gpd)

Tested Contaminant	Tested Influent Concentration (mg/l) <sup>1</sup>
Total Dissolved Solids (TDS)	$750 \pm 40$

**Other conditions:** the contaminant reduction capabilities displayed for table 3 of 4 were generated by testing conducted in accordance with NSF *International* Standard 58. To qualify, the device shall reduce the influent challenge concentrations by  $\geq 75\%$ .

1 = milligrams per liter (mg/l) are equivalent to parts per million (ppm)  
 $\pm$  = plus or minus  
 $\geq$  = greater than or equal to

**HEALTH EFFECTING ORGANIC CONTAMINANT REDUCTION CAPABILITIES  
 PRODUCT FILE NUMBER 20060403  
 TABLE 4 OF 4**

**Product Water Production Rate:** Standard storage tank = 75.0 liters per day (lpd) [19.8 gallons per day (gpd)]  
 1.0 Gallon QuickFlo storage tank = 122.6 lpd (32.4 gpd)  
 3.0 Gallon QuickFlo storage tank = 134.4 lpd (35.5 gpd)

**Capacity\*:** 18,931 liters (l) [500 gallons (gals.)]

<b>Tested Contaminant</b>	<b>Influent Challenge (µg/l)<sup>1</sup></b>
Alachlor	50
Atrazine	100
Benzene	81
Carbofuran	190
Carbon tetrachloride	78
Chlorobenzene	77
Chloropicrin	15
2,4-D	110
Dibromochloropropane (DBCP)	52
o-Dichlorobenzene	80
p-Dichlorobenzene	40
1,2-Dichloroethane	88
1,1-Dichloroethylene	83
cis-1,2-Dichloroethylene	170
trans-1,2-Dichloroethylene	86
1,2-Dichloropropane	80
cis-1,3-Dichloropropylene	79
Dinoseb	170
Endrin	53
Ethylbenzene	88
Ethylene dibromide (EDB)	44
<b>Haloacetonitriles (HAN):</b>	-
Bromochloroacetonitrile	22
Dibromoacetonitrile	24
Dichloroacetonitrile	9.6
Trichloroacetonitrile	15
<b>Haloketones (HK):</b>	-
1,1-Dichloro-2-propanone	7.2
1,1,1-Trichloro-2-propanone	8.2
Heptachlor	25
Heptachlor epoxide	10.7
Hexachlorobutadiene	44
Hexachlorocyclopentadiene	60
Lindane	55
Methoxychlor	50
Methyl <i>tert</i> -butyl ether (MtBE) <sup>†</sup>	15 ± 20%
Pentachlorophenol	96
Simazine	120
Styrene	150
1,1,2,2-Tetrachloroethane	81
Tetrachloroethylene	81
Toluene	78
2,4,5-TP (silvex)	270
Tribromoacetic acid	42
1,2,4-Trichlorobenzene	160

**HEALTH EFFECTING ORGANIC CONTAMINANT REDUCTION CAPABILITIES  
PRODUCT FILE NUMBER 20060403  
TABLE 4 OF 4 (continued)**

Tested Contaminant	Influent Challenge ( $\mu\text{g/l}$ ) <sup>1</sup>
1,1,1-Trichloroethane	84
1,1,2-Trichloroethane	150
Trichloroethylene	180
Trihalomethanes	-
chloroform ( <b>surrogate chemical</b> )	300
bromoform	-
bromodichloromethane	-
chlorodibromomethane	-
Xylenes (total)	70

**Other Conditions:** the contaminant reduction performance capabilities displayed for Table 4 of 4 were verified by testing conducted in accordance with NSF *International* Standard 58. To qualify for the reduction of the organic contaminants listed above, the device must reduce the influent challenge concentration of chloroform at 300  $\mu\text{g/l} \pm 10\%$  at each sample point by a minimum of 95%. To qualify for MtBE reduction, the device must reduce the influent challenge concentrations such that all effluent concentrations are  $\leq 5.0 \mu\text{g/l}$ . The organic chemical reduction performance claims displayed in Table 4 of 4 are based on the tested performance of the activated carbon "VX" post-filter component of this system.

<sup>1</sup> = micrograms per liter ( $\mu\text{g/l}$ ) are equivalent to parts per billion (ppb)

† = tested independently of the chloroform surrogate

$\leq$  = less than or equal to

◆ = a capacity is displayed for the organic chemicals displayed in "Table 4 of 4" because the organic chemical reduction capability for this device is a function of the "MACguard" activated carbon post filter, not the reverse osmosis membrane.

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 Integrated Services  
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