

# Performance Data Sheet

## Puronic® Reverse Osmosis Water Filtration System

Model: Micromax™ 8500

With filter cartridges: Sediment W-PN-8001, Pre GAC W-PN-8002, Post GAC W-PN-8004 and Membrane cartridge W-PN-8003

### Puronic Water Systems, Inc

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This filtration system has been tested and certified according to NSF/ANSI Standard 53, and 401 by WQA for the reduction of substances listed below, as verified and substantiated by data. The concentration of the indicated substances in the water entering the system was reduced to a concentration less than or equal to the permissible limit for leaving the system, as specified in NSF/ANSI Standards 53, and 401. Please see warranty insert for manufacturer's limited warranty. Please see installation instructions for internal operation and maintenance requirements.

Efficiency Rate: 23.8%<sup>4</sup>      Recovery Rate: 27.9%<sup>5</sup>      Daily Production Rate: 16 Gallons Per Day  
 Operating Temperature: Min 40°F / 4°C - Max 100°F / 38°C      Operating Pressure: 30-100 psi (276-690 kPa)  
 Laboratory Test Conditions: pH: 6.5 - 8.5      Water Temperature: 72°F / 23°C - 75°F / 24°C

Actual performance may vary with local water conditions.

Do not use with water that is microbiologically unsafe or of unknown water quality without adequate disinfection before or after the system. Systems certified for cyst reduction may be used on disinfected waters that may contain filterable cysts.

## Arsenic Fact Sheet

Arsenic (As) is a naturally occurring contaminant found in many ground waters. It generally occurs in two forms (valences or oxidations states): pentavalent arsenic (also known as As<sub>5</sub>, As(+5), or arsenate) and trivalent arsenic (also known as As<sub>3</sub>(III), As(+3), or arsenite.) In natural ground water, arsenic may exist as trivalent arsenic, pentavalent arsenic, or a combination of both. Although both forms of arsenic are potentially harmful to human health, trivalent arsenic is considered more harmful than pentavalent arsenic. More information about arsenic and its toxicity can be found on the U.S. Environmental Protection Agency website at <http://www.epa.gov/safewater/arsenic.html>.

Trivalent arsenic is generally more difficult to remove from drinking water than pentavalent arsenic. Trivalent arsenic can be converted to pentavalent arsenic in the presence of an effective oxidant such as free chlorine.

The arsenic in water containing detectable free chlorine or that has been treated with another effective oxidant will be in the pentavalent arsenic form. Treatment with chloramine (combined chlorine) is not sufficient to ensure complete conversion of trivalent arsenic to pentavalent arsenic.

Consumers using public water supplies can contact their utility to verify whether free chlorine treatment chemicals are being used. Private water supplies and waters that do not have detectable free chlorine residuals should be analyzed to determine the form(s) of arsenic present and the potential need for oxidation of trivalent arsenic to pentavalent arsenic.

Arsenic does not generally impart color, taste, or smell to water, therefore, it can only be detected by a chemical analytical test. Public water supplies are required to monitor treated water for total arsenic (trivalent arsenic plus pentavalent arsenic) and the results are available to the public from the utility. Consumers using private water sources will need to make arrangements for testing. A total arsenic test usually costs about \$15-\$30 and it is recommended a certified laboratory conduct test. Local health departments or environmental protection agencies can help provide consumers with a list of certified laboratories. Some laboratories may also be able to analyze specifically for (speciate) the forms of arsenic present in a water sample if requested and ordering information.

Water treatment systems are tested under laboratory conditions and found to reduce either 0.30 mg/L or 0.050 mg/L (refer to the product listing for influent tested levels) in the test water to less than 0/0.01 0 mg/L, under standard testing conditions. Actual performance of the system may vary depending on specific water quality conditions at the consumer's installation. Following installation of this system, the consumer should have the treated water tested for total arsenic to verify arsenic reduction is being achieved and the system is functioning properly.

The pentavalent arsenic removal component of this system must be replaced at the end of its useful life. Replacement component(s) can be purchased from the original source of this system (retailer or distributor), from other sources of this treatment system, or directly from the manufacturer. Refer to the installation and operation manual of your water treatment device to obtain replacement frequency and ordering information.

Not all water will contain contaminants listed. Testing performed under standard laboratory conditions; actual performance may vary. Filter is only to be used with cold water. Filter usage must comply with all state and local laws. Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system. Systems certified for cyst reduction may be used on disinfected waters that may contain filterable cysts.



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## Operating Parameters

System Model #	Replacement Component #	Filtration Function	Working Pressure	Operating Temperature	Flow rate	Capacity
Micromax™ 8500	W-PN-8001 (Sediment) W-PN-8002 (Pre GAC) W-PN-8003 (RO membrane) W-PN-8004 (Post GAC)	Chemical/ Mechanical	30 psi (276 - 690 kPa)	40 - 100 °F (4 - 38 °C)	0.5gpm (1.9lpm)	175gal

**Installation/Operation and Maintenance Requirements/Warranty Overview**  
Refer to Owner's Manual and Installation instructions for installation, operation, maintenance, and warranty information.

### Certification and Contaminant Reduction Information

Micromax 8500 RO system have been certified by WQA according to NSF/ANSI 42, NSF/ANSI 53, NSF/ANSI 58 and NSF/ANSI 401 for the reduction of the substances listed below. The concentration of the indicated substances in water entering the system was reduced to a concentration less than or equal to the permissible limit for water leaving the system as specified in NSF/ANSI 42, NSF/ANSI 53, NSF/ANSI 401. These systems are certified against NSF/ANSI 372 for Low Lead Content and against CSA B483.1.

### NSF/ANSI 42 Aesthetic Effects

	Average Influent Concentration	Average Effluent Concentration	Overall Percent Reduction	Maximum Effluent Concentration
Taste & Odor, Aesthetic Chlorine*	2.04	0.02	99.0%	0.02

\*Rated Service Flow: 0.5 gpm (1.9 lpm)

Capacity: 175 Gallons (622.5 L)

### NSF/ANSI 53 Health Effects

	Average Influent Concentration	Average Effluent Concentration	Overall Percent Reduction	Maximum Effluent Concentration
VOC Surrogate	328 ug/L	2.27 ug/L	99.30%	13.3 ug/L
PF0A/PF0S	1.5 ug/L	0.02 ug/L	99.00%	0.02 ug/L

### NSF/ANSI 58 Health Effects

	Average Influent Concentration	Average Effluent Concentration	Overall Percent Reduction	Maximum Effluent Concentration
Arsenic	360 ug/L	4 ug/L	98.8%	9 ug/L
Barium	9700 ug/L	190 ug/L	98.0%	270 ug/L
Cadmium	30 ug/L	1.3 ug/L	95.7%	2.0 ug/L
Chromium (Hexavalent)	290 ug/L	12 ug/L	95.8%	20 ug/L
Chromium (Trivalent)	330 ug/L	4ug/L	98.9%	4 ug/L
Copper	3100 ug/L	37 ug/L	98.8%	62 ug/L
Flouride	8.5 mg/L	0.3 mg/L	96.5%	0.4 mg/L
Lead	150 ug/L	5.6 ug/L	96.3%	7.5 ug/L
Radium 226/228	25 pCi/L	5 pCi/L	80.0%	5 pCi/L
Selenium	110 ug/L	<1 ug/L	>99.1%	<1 ug/L
Turbidity	11 NTU	<0.1 NTU	>99.1%	<0.1 NTU
TDS	737 mg/L	45.5mg/L	93.80%	

### NSF/ANSI 401 Emerging Contaminants Group A

	Average Influent Concentration	Average Effluent Concentration	Overall Percent Reduction	Maximum Effluent Concentration
Bisphenol A	1877 ng/L	100 ng/L	95%	300 ng/L
Estrone	120 ng/L	5 ng/L	96%	20 ng/L
Ibuprofen	438 ng/L	20 ng/L	95%	60 ng/L
Naproxen	130 ng/L	5 ng/L	96%	20 ng/L
Nonylphenol	1309 ng/L	100 ng/L	92%	200 ng/L

- This system has been tested for the treatment of water containing pentavalent arsenic (also known as As<sub>5</sub>, As(+5) or arsenate) at concentrations of 0.050 mg/L or less. This system reduces pentavalent arsenic, but may not remove other forms of arsenic. This system is to be used on water supplies containing a detectable free chlorine residual at the system inlet or on water supplies that have been demonstrated to contain only pentavalent arsenic. Treatment with chloramines (combined chlorine) is not sufficient to ensure complete conversion of trivalent arsenic to pentavalent arsenic. Please see Arsenic Fact Sheet for further information.
- Units are not certified on water supplies with pressure less than 30 psi (200kPa). A booster pump is strongly recommended.
- Efficiency rating means the percentage of the influent water to the system that is available to the user as reverse osmosis treated water under operating conditions that approximate typical daily usage.
- Recovery rate means the percentage of the influent water to the membrane portion of the system that is available to the user as reverse osmosis treated water when the system is operated without a storage tank or when the storage tank is bypassed.

Operating Temperature: Min 40°F / 4°C - Max 100°F / 38°C