

# Performance Data Sheet



Multipure Model No. MP750 Plus RO Drinking Water Systems have been tested and certified under NSF Standard Nos. 42, 53 and 58 as shown 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 53, Health Effects.



| Substance   | Percent Reduction** | Influent challenge concentration (mg/L unless specified)                                  | Maximum permissible product water concentration |
|---|---------------------|---|---|
| <b>ALACHLOR*</b>  | >98%                | 0.05  | 0.001   |
| <b>ASBESTOS</b>   | >99.9%              | 10 <sup>7</sup> to 10 <sup>8</sup> fibers/L; fibers greater than 10 micrometers in length | 99% reduction requirement                       |
| <b>ATRAZINE*</b>  | >97%                | 0.1   | 0.003   |
| <b>BENZENE*</b>   | >99%                | 0.081   | 0.001   |
| <b>BROMODICHLOROMETHANE (TTHM)*</b>                           | >99.8%              | 0.300 +/- 0.30  | 0.015   |
| <b>BROMOFORM (TTHM)*</b>                                      | >99.8%              | 0.300 +/- 0.30  | 0.015   |
| <b>CARBOFURAN (Furadan)*</b>                                  | >99%                | 0.19  | 0.001   |
| <b>CARBON TETRACHLORIDE*</b>                                  | 98%                 | 0.078   | 0.0018  |
| <b>CHLORDANE</b>  | >99.5%              | 0.04 +/-10%   | 0.002   |
| <b>CHLOROBENZENE (Monochlorobenzene)*</b>                     | >99%                | 0.077   | 0.001   |
| <b>CHLOROPICRIN*</b>  | 99%                 | 0.015   | 0.0002  |
| <b>CHLOROFORM (TTHM)* (surrogate chemical)</b>                | >99.8%              | 0.300 +/- 0.30  | 0.015   |
| <b>Cryptosporidium (CYST)</b>                                 | 99.95%              | minimum 50,000/mL   | 99.95%  |
| <b>CYST (Giardia; Cryptosporidium; Entamoeba; Toxoplasma)</b> | 99.95%              | minimum 50,000/mL   | 99.95%  |
| <b>2, 4-D*</b>  | 98%                 | 0.110   | 0.0017  |
| <b>DBCP (see Dibromochloropropane)*</b>                       | >99%                | 0.052   | 0.00002   |
| <b>1,2-DCA (see 1,2-DICHLOROETHANE)*</b>                      | 95%                 | 0.088   | 0.0048  |
| <b>1,1-DCE (see 1,1-DICHLOROETHYLENE)*</b>                    | >99%                | 0.083   | 0.001   |
| <b>DIBROMOCHLOROMETHANE (TTHM; Chlorodibromomethane)*</b>     | >99.8%              | 0.300 +/- 0.30  | 0.015   |
| <b>DIBROMOCHLOROPROPANE (DBCP)*</b>                           | >99%                | 0.052   | 0.00002   |
| <b>o-DICHLOROBENZENE (1,2 Dichlorobenzene)*</b>               | >99%                | 0.08  | 0.001   |
| <b>p-DICHLOROBENZENE (para-Dichlorobenzene)*</b>              | >98%                | 0.04  | 0.001   |
| <b>1,2-DICHLOROETHANE (1,2-DCA)*</b>                          | 95%                 | 0.088   | 0.0048  |
| <b>1,1-DICHLOROETHYLENE (1,1-DCE)*</b>                        | >99%                | 0.083   | 0.001   |
| <b>CIS-1,2-DICHLOROETHYLENE*</b>                              | >99%                | 0.17  | 0.0005  |
| <b>TRANS-1,2- DICHLOROETHYLENE*</b>                           | >99%                | 0.086   | 0.001   |
| <b>1,2-DICHLOROPROPANE (Propylene Dichloride)*</b>            | >99%                | 0.08  | 0.001   |
| <b>CIS-1,3- DICHLOROPROPYLENE*</b>                            | >99%                | 0.079   | 0.001   |
| <b>DINOSEB*</b>   | 99%                 | 0.17  | 0.0002  |
| <b>EDB (see ETHYLENE DIBROMIDE)*</b>                          | >99%                | 0.044   | 0.00002   |
| <b>ENDRIN*</b>  | 99%                 | 0.053   | 0.00059   |
| <b>Entamoeba (see CYSTS)</b>                                  | 99.95%              | minimum 50,000/mL   | 99.95%  |
| <b>ETHYLBENZENE*</b>  | >99%                | 0.088   | 0.001   |
| <b>ETHYLENE DIBROMIDE (EDB)*</b>                              | >99%                | 0.044   | 0.00002   |
| <b>Furadan (see CARBOFURAN)*</b>                              | >99%                | 0.19  | 0.001   |
| <b>Giardia Lamblia (see CYST)</b>                             | >99.95%             | minimum 50,000/mL   | 99.95%  |
| <b>HALOACETONITRILES (HAN)*</b>                               |                     |   |   |
| <b>BROMOCHLOROACETONITRILE</b>                                | 98%                 | 0.022   | 0.0005  |
| <b>DIBROMOACETONITRILE</b>                                    | 98%                 | 0.024   | 0.0006  |
| <b>DICHLOROACETONITRILE</b>                                   | 98%                 | 0.0096  | 0.0002  |
| <b>TRICHLOROACETONITRILE</b>                                  | 98%                 | 0.015   | 0.0003  |
| <b>HALOKETONES (HK):*</b>                                     |                     |   |   |
| <b>1,1-DICHLORO-2-PROPANONE</b>                               | 99%                 | 0.0072  | 0.0001  |
| <b>1,1,1-TRICHLORO-2-PROPANONE</b>                            | 96%                 | 0.0082  | 0.0003  |

\*\* Percent reduction reflects actual performance of Multipure product as specifically tested (at 200% of capacity). Percent reduction shown for VOCs\* reflects the allowable claims for Volatile Organic Chemicals/Compounds as per Tables. Chloroform was used as a surrogate for VOC reduction claims; the Multipure Systems actual reduction rate of Chloroform was >99.8% as tested (at 200% capacity).

| Substance  | Percent Reduction** | Influent challenge concentration (mg/L unless specified) | Maximum permissible product water concentration |
|--|---------------------|--|---|
| HEPTACHLOR*  | >99%                | 0.25   | 0.00001   |
| HEPTACHLOR EPOXIDE*  | 98%                 | 0.0107   | 0.0002  |
| HEXACHLOROBUTADIENE (Perchlorobutadiene)*  | >98%                | 0.044  | 0.001   |
| HEXACHLOROCYCLOPENTADIENE*   | >99%                | 0.060  | 0.000002  |
| LEAD (pH 6.5)  | >99.3%              | 0.15 +/- 10%   | 0.010   |
| LEAD (pH 8.5)  | >99.3%              | 0.15 +/- 10%   | 0.010   |
| LINDANE*   | >99%                | 0.055  | 0.00001   |
| MERCURY (pH 6.5)   | >99%                | 0.006 +/- 10%  | 0.002   |
| MERCURY (pH 8.5)   | >99%                | 0.006 +/- 10%  | 0.002   |
| METHOXYCHLOR*  | >99%                | 0.050  | 0.0001  |
| Methylbenzene (see TOLUENE)*   | >99%                | 0.078  | 0.001   |
| Monochlorobenzene (see CHLOROBENZENE)*   | >99%                | 0.077  | 0.001   |
| MTBE (methyl tert-butyl ether)   | >96.6%              | 0.015 +/- 20%  | 0.005   |
| POLYCHLORINATED BIPHENYLS (PCBs , Aroclor 1260)  | >99.9%              | 0.01 +/- 10%   | 0.0005  |
| PCE (see TETRACHLOROETHYLENE)*   | >99%                | 0.081  | 0.001   |
| PENTACHLOROPHENOL*   | >99%                | 0.096  | 0.001   |
| Perchlorobutadiene (see HEXACHLOROBUTADIENE)*  | >98%                | 0.044  | 0.001   |
| Propylene Dichloride (see 1,2-DICHLOROPROPANE)*  | >99%                | 0.080  | 0.001   |
| SIMAZINE*  | >97%                | 0.120  | 0.004   |
| Silvex (see 2,4,5-TP)*   | 99%                 | 0.270  | 0.0016  |
| STYRENE (Vinylbenzene)*  | >99%                | 0.15   | 0.0005  |
| 1,1,1-TCA (see 1,1,1-TRICHLOROETHANE)*   | 95%                 | 0.084  | 0.0046  |
| TCE (see TRICHLOROETHYLENE)*   | >99%                | 0.180  | 0.0010  |
| 1,1,2,2-TETRACHLOROETHANE*   | >99%                | 0.081  | 0.001   |
| TETRACHLOROETHYLENE*   | >99%                | 0.081  | 0.001   |
| TOLUENE (Methylbenzene)*   | >99%                | 0.078  | 0.001   |
| TOXAPHENE  | >92.9%              | 0.015 +/- 10%  | 0.003   |
| Toxoplasma (see CYSTS)   | 99.95%              | minimum 50,000/mL  | 99.95%  |
| 2,4,5-TP (Silvex)*   | 99%                 | 0.270  | 0.0016  |
| TRIBROMOACETIC ACID*   |                     | 0.042  | 0.001   |
| 1,2,4 TRICHLOROBENZENE (Unsymtrichlorobenzene)*  | >99%                | 0.160  | 0.0005  |
| 1,1,1-TRICHLOROETHANE (1,1,1-TCA)*   | 95%                 | 0.084  | 0.0046  |
| 1,1,2-TRICHLOROETHANE*   | >99%                | 0.150  | 0.0005  |
| TRICHLOROETHYLENE (TCE)*   | >99%                | 0.180  | 0.0010  |
| TRIHALOMETHANES (TTHM) (Chloroform; Bromoform; Bromodichloromethane; Dibromochloromethane) | >99.8%              | 0.300 +/- 0.30   | 0.015   |
| TURBIDITY  | >99%                | 11 +/- NTU   | 0.5 NTU   |
| Unsym-Trichlorobenzene (see 1,2,4-TRICHLOROBENZENE)*                                       | >99%                | 0.160  | 0.0005  |
| Vinylbenzene (see STYRENE)*  | >99%                | 0.150  | 0.0005  |
| XYLENES (TOTAL)*   | >99%                | 0.070  | 0.001   |

### NSF/ANSI 42 - Aesthetic Effects

The System has been tested according to NSF/ANSI Standard 42 for the reduction of the following substances. 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.

| Substance   | Percent Reduction** | Influent challenge concentration | Maximum permissible product water concentration |
|---|---------------------|----------------------------------|---|
| CHLORAMINE as Aesthetic Effect (As Monochloramine)                            | >97%                | 3.0 mg/L +/- 10%                 | 0.5 mg/L  |
| CHLORINE as Aesthetic Effect  | 99%                 | 2.0 Mg/L +/- 10%                 | > or = 50%                                      |
| PARTICULATE, (Nominal Particulate Reduction, Class I, Particles 0.5 TO <1 UM) | Class I > 99%       | At Least 10,000 particles/mL     | > or = 85%                                      |

## NSF/ANSI 58 - Reverse Osmosis

The System has been tested according to NSF/ANSI Standard 58 for the reduction of the following substances. 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 58.

| Substance   | Percent Reduction <sup>±</sup> | Influent challenge concentration | Maximum permissible product water concentration |
|---|--------------------------------|----------------------------------|---|
| <b>Arsenic V</b> (pentavalent As (V); As(+5); arsenate)       | 98.4%                          | 0.30 +/- 10%                     | 0.010   |
| <b>Barium</b>   | 97.9%                          | 10.0 +/- 10%                     | 2.0   |
| <b>Cadmium</b>  | 98.6%                          | 0.03 +/- 10%                     | 0.005   |
| <b>Chromium, Hexavalent</b>                                   | 91.3%                          | 0.3 +/- 10%                      | 0.1   |
| <b>Chromium, Trivalent</b>                                    | 94.1%                          | 0.3 +/- 10%                      | 0.1   |
| <b>Copper</b>   | 99.0%                          | 3.0 +/- 10%                      | 1.3   |
| <b>Cyst</b> (Giardia; Cryptosporidium; Entamoeba; Toxoplasma) | 99.99%                         | 50,000 mL                        | 0.9995  |
| <b>Fluoride</b>   | 93.9%                          | 8.0 +/- 10%                      | 1.5   |
| <b>Lead</b>   | 98.6%                          | 0.15 +/- 10%                     | 0.010   |
| <b>Nitrate</b>  | 92.0%                          | 30.0 +/- 10%                     | 10.0  |
| <b>Nitrite</b>  | 89.0%                          | 3.0 +/- 10%                      | 1.0   |
| <b>Nitrate/Nitrite</b>  | 91.2%                          | 30.0 +/- 10%                     | 10.0  |
| <b>Perchlorate</b>  | 96.5%                          | 0.10 +/- 10%                     | 0.006   |
| <b>Radium 226/228</b>   | 80.0%                          | 25 pCi/L +/- 10%                 | 5 pCi/L   |
| <b>Selenium</b>   | 92.0%                          | 0.10 +/- 10%                     | 0.05  |
| <b>Total Dissolved Solids (TDS)</b>                           | 96.8%                          | 750 +/- 40 mg/L                  | 187   |

### NOTES:

1. Multipure Drinking Water Systems have been certified, as indicated, by NSF International for compliance to NSF/ANSI Standard Nos. 42 and 53, and 58.
2. This Multipure Drinking Water System(s) have been certified by the State of California Department of Health Services for the reduction of specific contaminants listed herein.
3. Chloroform was used as a surrogate for claims of reduction of Volatile Organic Chemicals (VOC). Multipure Systems tested at >99.8% actual reduction of Chloroform. Percent reduction shown herein reflects the allowable claims for VOCs as per tables in the Standard.
4. **Do not use with water that is microbiologically unsafe or with water of unknown quality without adequate disinfection before or after the unit. Systems certified for cyst reduction may be used on disinfected waters that may contain filterable cysts.**
5. The System may be used with municipal or well water sources that are treated and tested on a regular basis to ensure bacteriological safe quality of the water.
6. Do not allow water to freeze in the unit. If unit is exposed to freezing temperatures, drain water from unit and remove filters.
7. Do not allow water to sit in unit for extended periods of time (10 or more days) without being used. If unit is to be left unused for more than 10 days, drain all water from the system and remove the filters. Upon your return, reconnect the filters in the housing and continue use. In the event water does sit in the unit for 10 or more days, the system should be flushed by allowing water to flow to waste for about 10 minutes; then continue use as normal.
8. Multipure Drinking Water System Housings are warranted for Lifetime (provided that the filter be replaced at least once a year). All exterior hoses and attachments to the System are warranted for defects in material and workmanship for one year. Please see the Owner's Manual for complete product guarantee and warranty information.
9. Please see the Owner's Manual for installation instructions and operating procedures.
10. In compliance with New York law, it is recommended that before purchasing a water treatment system, NY residents have their water supply tested to determine their actual water treatment needs. Please compare the capabilities of the Multipure unit with your actual water treatment needs.
11. While testing was performed under standard laboratory conditions, actual performance may vary.
12. The list of substances which the treatment device reduces does not necessarily mean that these substances are present in your tap water.
13. This system is acceptable for treatment of influent concentrations of no more than 27 mg/L nitrate and 3 mg/L nitrite in combination measured as N and is certified for nitrate/nitrite reduction only for water supplies with a pressure of 280 kPa (40 psig) or greater.
14. This system has been tested for the treatment of water containing pentavalent arsenic (also known as As(V), As(+5), or arsenate) at concentrations of 0.50 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 chloramine (combined chlorine) is not sufficient to ensure complete conversion of trivalent arsenic to pentavalent arsenic. Please see the Arsenic Facts section of the Performance Data Sheet for further information.

## Replacement Filters and Parts

Filter life will vary in proportion to the amount of water used and the level of impurities in the water being processed. Replacement filters, membrane, and parts can be purchased directly from Multipure Corporation. Replacement filter model numbers are shown below. The approximate retail price of replacement filters is also shown below. Prices exclude sales tax and shipping and handling fees (\*prices subject to change without notice).

To dispose of the used filter or membrane, remove it from the housing and place the old filter or membrane in your normal refuse. Carbon filters disposed of in a normal landfill will not release any chemical contamination but will probably continue to adsorb additional contaminants that are disposed of in landfills.

| Description                               | Model No. | Recommended Change Schedule        |
|---|-----------|------------------------------------|
| Sediment Pre-Filter (Stage 1)             | CBC110    | 6 months                           |
| 5 micron Carbon Pre-Filter (Stages 2 & 3) | CBC112    | 6 months                           |
| Sub micron Carbon Post-Filter             | CB6       | 750 gallons (at least once a year) |
| RO membrane                               | CB-ROM    | 2 to 3 years                       |

## MP750 Plus RO Operation and Maintenance Specifications

Depending on water chemistry, water temperature, and water pressure, the MP750 Plus RO System production and performance will vary. Refer to Owner's Manual for further maintenance requirements and warranty information.

| Parameter                      | Comments   |
|--------------------------------|--|
| <b>General Use Conditions:</b> |  |
| Maximum Operating Temperature  | 100°F / 40.5°C   |
| Minimum Operating Temperature  | 40°F / 0°C   |
| Maximum Working Pressure       | 100 psi / 7.0 kg/cm <sup>2</sup><br>The operating pressure in your home should be tested over a 24 hour period to attain the maximum pressure. If it is over 100 psi then a pressure regulator will be required.   |
| Minimum Working Pressure       | 40 psi / 2.8 kg/cm <sup>2</sup>  |
| pH parameters                  | 3 pH to 11 pH  |
| Iron                           | 0.2 ppm maximum  |
| TDS (total dissolved solids)   | < 1800 ppm   |
| Turbidity                      | < 5 NTU  |
| Hardness                       | < 10 grains per gallon / 171 mg/L of hardness as CaCO <sub>3</sub><br>System will operate with hardness over 10 grains, but the membrane life may be shortened.  |
| <b>Specifications:</b>         |  |
| Average influent TDS           | 765 mg/L   |
| Average effluent TDS           | 23 mg/L  |
| Daily Production Rate (DPR)    | 17.32 gpd<br>Gallons produced per day  |
| Efficiency Rating              | 8.91%<br>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 Rating                | 16.34%<br>Recovery rating 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. |
| Capacity of Tank               | 1.8 - 2.5 gallons<br>Depending on the incoming water pressure.   |
| Approximate Flow Rate @ 60 psi | 0.50 gpm   |

Note: This Performance Data Sheet addresses the U.S. Environmental Protection Agency (USEPA) Primary and Secondary Drinking Water Regulations in effect at its time of publication, as they related to Multipure's performance in conformance to the industry performance criteria. These regulations are continually being updated at the Federal level. Accordingly, this list of MCLs will be reviewed and amended when appropriate. Please see sales brochure for list of product certifications.

**Facts About Arsenic** (in compliance with NSF Standard 58)

Arsenic (abbreviated As) is a naturally occurring contaminant found in many ground waters. Arsenic in water has no color, taste or odor. It must be measured by a lab test. Public water utilities must have their water tested for arsenic. You can get the results from your water utility. If you have your own well, you can have the water tested. The local health department or the state environmental health agency can provide a list of certified labs. The cost is typically \$15 to \$30. Information about arsenic in water can be found on the Internet at the US Environmental Protection Agency website: [www.epa.gov/safewater/arsenic.html](http://www.epa.gov/safewater/arsenic.html).

There are two forms of arsenic: pentavalent arsenic (also called As(V), As(+5), and arsenate) and trivalent arsenic (also called As(III), As(+3), and arsenite). In well water, arsenic may be pentavalent, trivalent, or a combination of both. Special sampling procedures are needed for a lab to determine what type and how much of each type of arsenic is in the water. Check with the labs in your area to see if they can provide this type of service.

Reverse Osmosis (RO) systems are very effective at removing pentavalent arsenic. However, RO systems do not remove trivalent arsenic from water very well. A free chlorine residual will rapidly convert trivalent arsenic to pentavalent arsenic. Other water treatment chemicals such as ozone and potassium permanganate will also change trivalent arsenic to pentavalent arsenic. A combined chlorine residual (also called chloramine) may not convert all the trivalent arsenic. If you get your water from a public water utility, contact the utility to find out if free chlorine or combined chlorine is used in the water system.

The **Multipure MP750 Plus RO** is designed to remove only pentavalent arsenic. It will not convert trivalent arsenic to pentavalent arsenic.

This treatment system was tested in a laboratory to remove pentavalent arsenic. Under lab conditions, as defined in NSF/ANSI Standard 58, the system reduced 0.50 mg/L (ppm) pentavalent arsenic to 0.010 mg/L (ppm) (the USEPA standard for drinking water) or less. The performance of the system may be different at your installation. Have the treated water tested for arsenic to check if the system is working properly.

The RO component of the **Multipure MP750 Plus RO** system must be replaced as indicated in the Owner's Manual to ensure the system will continue to remove arsenic and other contaminants. The component identification and locations where you can purchase the component are listed in the installation/operation manual.

## California Department of Public Health Certification / Registration

State of California  
Department of Health Services  
Water Treatment Device  
Certificate Number

04 - 1628

Date Issued: September 23, 2004

| Trademark/Model Designation | Replacement Elements                 |
|-----------------------------|--------------------------------------|
| MP750 Plus RO               | CB6<br>CBC110<br>CBC112<br>CB-ROM    |
| MP750 Plus RO               | CB1VOC<br>CBC110<br>CBC112<br>CB-ROM |

**Manufacturer:** Multi-Pure Corporation

The water treatment device(s) listed on this certificate have met the testing requirements pursuant to Section 116830 of the Health and Safety Code for the following health related contaminants:

**Microbiological Contaminants and Turbidity**

Cysts (protozoan)  
Turbidity

**Organic Contaminants**

Chlordane  
PCBs  
Toxaphene  
VOCs

**Inorganic/Radiological Contaminants**

Arsenic<sup>1</sup>  
Asbestos  
Barium  
Cadmium  
Chromium (hexavalent)  
Chromium (trivalent)  
Copper  
Fluoride  
Lead  
Mercury  
Nitrate/Nitrite<sup>2</sup>  
Radium 226/228  
Selenium

**Rated Service Capacity:** 750 gallons

**Rated Service Flow:** 0.5 gpm

**Conditions of Certification:**

Do not use where water is microbiologically unsafe or with water of unknown quality, except that systems claiming cyst reduction may be used on water containing cysts.

<sup>1</sup> Claims for arsenic reduction shall only be made on water supplies maintaining detectable residual free chlorine at the reverse osmosis (RO) system inlet. Water systems using an in-line chlorinator should provide a minimum of 1 minute chlorine contact time before the RO system.

<sup>2</sup> This system is acceptable for treatment of influent concentrations of no more than 27 mg/L nitrate and 3 mg/L nitrite in combination measured as N and is certified for nitrate/nitrite reduction only for water supplies with a pressure of 280 kPa (40 psig) or greater. A sampling and analysis test kit for nitrate is provided for checking the performance of this system. Frequent analysis is encouraged.



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BR170RO/1203