

### **PERFORMANCE DATA SHEET Kinetico Drinking Water System**

Plus Deluxe Models VX & GX



Reinventing Water



Kinetico Drinking Water System Plus Deluxe GX and VX models are tested and certified to NSF/ANSI Standard 42 for the reduction of aesthetic chlorine, taste and odor and to Standard 58 for the reduction of substances listed herein. VX models are also tested and certified to NSF/ANSI Standard 53 for VOC (volatile organic compounds) and MTBE (methyl tertiary butyl ether) reduction.

In addition, the materials and components as well as the design and construction of this system have been tested by NSF International to the requirements of NSF/ANSI Standard 58. This is to assure that levels of extractable contaminants do not exceed established limits and that the system will accomplish its intended purpose when installed and operated according to the manufacturer's instructions.

#### **IMPORTANT**

- Do not use on 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 water that may contain filterable cysts.
- Installation of this product must comply with all applicable laws.
- Provisions for an antisiphon air gap should be part of the installation to prevent a cross connection between the water system and the waste system.
- Do not use on water that contains more than 0.1 ppm iron, more than 10 gpg hardness, more than 3000 ppm TDS or that falls outside the pH range of 3 to 11. Do not use systems with sediment prefilters on water that contains chlorine.
- If a noticeable change in product water production, taste or odor occurs, contact your authorized Kinetico dealer.
- Models used for nitrate/nitrite reduction are 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 are certified for nitrate/nitrite reduction only for water supplies with a pressure of 280 kPa (40 psig) or greater (with test kit part no. 7329 with 1gal/3.8L QuickFlo tank, 3 gal/11.4L QuickFlo tank or standard tank).
- If you purchased your system specifically for nitrate reduction, Kinetico recommends periodic (quarterly) testing with a nitrate/nitrite test kit (part no. 7329) to assure that nitrate/nitrites are being reduced to acceptable levels.

#### REPLACEMENT CARTRIDGES FOR KINETICO DRINKING WATER SYSTEM PLUS DELUXE MODELS

| Pr   | efilter                                | RO Membrane                                       | MACGuard <sup>TM</sup> Postfilter   |
|--|--|---|---|
| CHLORINATED WATER SUPPLY (City Water or Chlorinated Well)      | NON-CHLORINATED WATER<br>SUPPLY        |   | ALL WATER SUPPLIES<br>(CITY WATER OR WELL)  |
| High Capacity Carbon/Sediment<br>Prefilter<br>(Part No. 9461A) | Sediment Prefilter<br>(Part No. 9309A) | 75 gpd/285 Lpd<br>RO Membrane<br>(Part No. 10501) | For GX Models Taste & Odor Postfilter (Part No. 9306B)  For VX Models Taste, Odor, MTBE & VOC Postfilter (Part No. 9307A) |

#### PERFORMANCE and MAINTENANCE

This reverse osmosis system contains replaceable treatment components critical for the effective reduction of total dissolved solids (TDS). Test the product water quarterly to verify that the system is performing satisfactorily. This system has been tested and verified by NSF International and the WQA that it will decrease the discharge of product water by 50% or greater at 500 gallons. This shut down prevents the effluent contaminant level from exceeding the EPA's maximum contaminant level under normal operating conditions. To restore service, replace both the prefilter and postfilter cartridges. Annual replacement is recommended even if your system has not yet shut down. See the chart above to select cartridges for your system. These cartridges are available through your local Kinetico dealer. You may opt to have the product water tested at this time to verify performance. For operation and maintenance information, consult the owner's manual. Installation instructions are available for review from your authorized Kinetico dealer.

#### **WARRANTY COVERAGE**

The Kinetico Drinking Water System Plus Deluxe carries a limited manufacturer's warranty. If the Kinetico Drinking Water System Plus Deluxe is installed in conjunction with a Kinetico Water Conditioner, the warranty covers the parts of the Kinetico Drinking Water System Plus Deluxe for seven years and the reverse osmosis membrane for seven years. If the Kinetico Drinking Water System Plus Deluxe is installed without a Kinetico Water Conditioner, the Plus Deluxe system parts are covered for seven years and the membrane is covered for four years. For complete details, see the actual warranty. The warranty will be void if influent water conditions exceed those specified in the system parameters.



#### **CONTAMINANT REDUCTION CAPABILITIES**

**IMPORTANT NOTICE!** Read this performance data sheet and compare the capabilities of the Plus Deluxe unit with your actual water treatment needs. Please note that the contaminants listed below are not necessarily in your water and that while testing was performed under standard laboratory conditions, actual performance may vary. It is recommended that before purchasing a water treatment unit, you have your water supply tested to determine your actual water treatment needs. The system has been tested according to NSF/ANSI Standard 42, 53 and 58 for 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 Standard 42, 53 and 58. The chart below contains the following information based on NSF test results:

- A list of substances that will be reduced by Kinetico Drinking Water System Plus Deluxe models
- The percent of reduction that can be expected
- Conditions under which the units were tested (pressure, pH and temperature)
- Influent and effluent levels of contaminated tested water
- The USEPA's maximum contaminant level (MCL)

#### Drinking Water System Plus Deluxe

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|--------------------------------------|-------------------------------------|--------------------|-----------------|------|--|--|--|----------------------|---------------------------------|------------------------|--|---|----------------------------------|
| SUBSTANCE                            | Test Pressure (psi)                 | Flow Rate<br>(gpm) | Temperature(°F) | рН   | Average<br>Influent<br>Level<br>(mg/L) | Average<br>Effluent<br>Level<br>(mg/L) | Maximum<br>Effluent<br>Level<br>(mg/L) | Percent<br>Reduction | Minimum<br>Percent<br>Reduction | USEPA<br>MCL<br>(mg/L) | Influent<br>Challenge<br>Concentration<br>(mg/L) | Maximum Permissible Product Water Concentrations (mg/L) | Percent Reduction<br>Requirement |
| Pentavalent Arsenic <sup>C</sup>     | 50                                  | 0.75               | 77              | 5.89 | 0.30                                   | < 0.001                                | 0.004                                  | 99.7                 | 98.5                            | 0.010                  | 0.30 ± 10%                                       | 0.010   |                                  |
| Barium                               | 50                                  | 0.75               | 77              | 5.81 | 10.2                                   | 0.13                                   | 0.27                                   | 98.7                 |                                 | 2.0                    | 10.0 ± 10%                                       | 2.0   |                                  |
| Hexavalent Chromium                  | 50                                  | 0.75               | 77              | 5.89 | 0.3                                    | 0.006                                  | 0.013                                  | 98.0                 |                                 | .05                    | 0.3±10%  | 0.1   |                                  |
| Trivalent Chromium                   | 50                                  | 0.75               | 77              | 5.81 | 0.30                                   | 0.003                                  | 0.008                                  | 99.0                 |                                 | .05                    | 0.3±10%  | 0.1   |                                  |
| Cadmium                              | 50                                  | 0.75               | 77              | 7.53 | 0.031                                  | 0.0001                                 | 0.0009                                 | 99.7                 |                                 | 0.005                  | 0.03 ± 10%                                       | 0.005   |                                  |
| Aesthetic Chlorine                   | 60                                  | 0.75               | 67.6            | 7.55 | 1.8                                    | 0.04                                   | 0.10                                   | 97.7                 | 94.4                            |                        | 2.0±10%  |   | ≥50%                             |
| Copper                               | 50                                  | 0.75               | 77              | 7.51 | 3.0                                    | 0.04                                   | 0.06                                   | 98.7                 |                                 |                        | 3.0±10%  | 1.3   |                                  |
| Fluoride                             | 50                                  | 0.75               | 77              | 7.53 | 8.0                                    | 0.33                                   | 0.47                                   | 95.9                 | 96                              | 4.0                    | 8.0±10%  | 1.5   |                                  |
| *MTBE<br>methyl tertiary butyl ether | 60                                  | 0.75               | 65              | 7.68 | 0.015                                  | 0.0006                                 | 0.0012                                 | 95.7                 | 92                              |                        | 0.015±20%  | 0.005   |                                  |
| Radium 226/228                       | 50                                  | 0.75               | 77              | 5.81 | 25pCi/L                                | 5 pCi/L                                | 5                                      | 80                   |                                 | 5 pCi/L                | 25pCi/L ±10%                                     | 5 pCi/L   |                                  |
| Selenium                             | 50                                  | 0.75               | 77              | 7.53 | 0.10                                   | <0.001                                 | < 0.001                                | 99.0                 |                                 | 0.05                   | 0.10±10%   | 0.05  |                                  |
| Lead                                 | 50                                  | 0.75               | 77              | 5.68 | 0.15                                   | 0.004                                  | 0.008                                  | 97.3                 |                                 | 0.015                  | 0.15±10%   | 0.010   |                                  |
| Cyst <sup>A</sup> (3-4 micron)       | 50                                  | 0.75               | 77              | 7.81 | 140000/<br>ml                          | 8/ml                                   | 20/ml                                  | 99.99                |                                 |                        | Min<br>50,000/ml                                 |   | 99.95%                           |
| Turbidity                            | 50                                  | 0.75               | 69.8            | 7.52 | 81 NTU                                 | 0.15<br>NTU                            | 0.28<br>NTU                            | 99.8                 | 97.9                            |                        | 11±1 NTU   | 0.5 NTU   |                                  |
| *VOCs <sup>B</sup>                   | 60                                  | 0.75               | 68.8            | 7.90 | 0.29                                   | 0.0011                                 | 0.0037                                 | 99.6                 | 98.7                            |                        |  |   | 95%                              |

A - Cyst reduction includes oocysts of cryptosporidium and cysts of giardia and entamoeba. Cyst influent and effluent are measured in #/ml.

California Dept. of Health Services certificate numbers for Plus Deluxe GX Model: 05-1577 w/ 1G QuickFlo; 05-1726 w/ 3G QuickFlo; 05-1725 w/ 3G air-charged tank. California Dept. of Health Services certificate numbers for Plus Deluxe VX Model: 05-1578 w/ 1G QuickFlo; 05-1724 w/ 3G QuickFlo; 05-1723 w/ 3G air-charged tank.

C - Conforms to NSF/ANSI 53 for pentavalent arsenic reduction. See page 6 for additional arsenic treatment facts.





The Kinetico Drinking Water System Plus Deluxe is tested and certified under NSF/ANSI Standard 58 for the reduction of Pentavalent arsenic, barium, cadmium, copper, cysts (including oocysts of cryptosporidium and cysts of giardia and entamoeba), fluoride, hexavalent chromium, lead, nitrite/nitrate (with test kit, part no. 7329 and on the 1gal/3.8L QuickFlo tank, 3gal/11.4L QuickFlo tank and standard tank), radium 226/228, selenium, total dissolved solids, turbidity and trivalent chromium and NSF/ANSI Standard 42 for aesthetic chlorine taste and odor reduction.VX models are also certified to NSF/ANSI Standard 53 for MTBE and VOC reduction as verified and substantiated by test data.

B - Chloroform was used as a surrogate for these chemicals per NSF/ANSI Standard 53.

<sup>\*</sup>VX Models only



#### **General Specifications (ALL MODELS)**

Minimum/Maximum Operating Temperature: 2°C-38°C (35°F-100°F)

Ambient Temperature, Operating Conditions: 32°C/90°F

Minimum/Maximum Operating Pressure: 241.3-689.5 kPa (35/100 psi; 40-100 psi (275 kPa -689.5 kPa) for nitrate/nitrite reduction)

#### MODEL SPECIFIC INFORMATION

Model Name: Drinking Water System Plus Deluxe GX or VX with 3 Gallon QuickFlo Tank

Discharge Water/Product Water Ratio: 2.7 to 1

Product Water Production Rate (Daily Production Rate) 35.5 gpd (134.4 Lpd) Efficiency Rating<sup>1</sup>: 27.52%, Recovery Rating<sup>2</sup>: 35.19%

| SUBSTANCE                    | Test Pressure<br>(psi) | Flow Rate<br>(gpm) | Temperature<br>(°F) | рН   | Average<br>Influent<br>Level<br>(mg/L) | Average<br>Effluent<br>Level<br>(mg/L) | Maximum<br>Effluent<br>Level<br>(mg/L) | Average<br>Percent<br>Reduction | Minimum<br>Percent<br>Reduction | USEPA<br>MCL<br>(mg/L) | Influent<br>Challenge<br>Concentration<br>(mg/L) | Maximum<br>Permissible Product<br>Water Concentrations<br>(mg/L)t | Percent Reduction<br>Requiremen |
|------------------------------|------------------------|--------------------|---------------------|------|--|--|--|---------------------------------|---------------------------------|------------------------|--|---|---------------------------------|
| Nitrate/Nitrite<br>both as N | 50                     | 0.75               | 75.2                | 7.75 |  |  |  |                                 |                                 | 10.0                   | 30.0±10%   | 10.0  |                                 |
| Nitrate-N                    | 50                     | 0.75               | 75.2                | 7.75 | 26                                     | 3.2                                    | 4.81                                   | 87.69                           | 81.54                           | 10.0                   | 27.0±10%   | 10.0  |                                 |
| Nitrite-N                    | 50                     | 0.75               | 75.2                | 7.75 | 3                                      | < 0.50                                 | < 0.5                                  | >83.3                           | >83.3                           | 1.0                    | 3.0±10%  | 1.0   |                                 |
| $TDS^{A}$                    | 50                     | 0.75               | 77                  | 6.10 | 759                                    | 38.3                                   | 46                                     | 94.9                            | 93.9                            | 500                    | 750±40 mg/L                                      | 187   |                                 |

Model Name: Drinking Water System Plus Deluxe GX or VX with 1 Gallon QuickFlo Tank

Discharge Water/Product Water Ratio: 2.7 to 1

Product Water Production Rate (Daily Production Rate) 32.45 gpd (122.8 Lpd) Efficiency Rating<sup>1</sup>: 26.76%, Recovery Rating<sup>2</sup>: 35.23%

|                              |                        |                 | ()                  |      |  | , 2                                    | Sr ( I                                 |                                 | ,8                              | ,                      |  |  |                                  |
|------------------------------|------------------------|-----------------|---------------------|------|--|--|--|---------------------------------|---------------------------------|------------------------|--|--|----------------------------------|
| SUBSTANCE                    | Test Pressure<br>(psi) | Flow Rate (gpm) | Temperature<br>(°F) | рН   | Average<br>Influent<br>Level<br>(mg/L) | Average<br>Effluent<br>Level<br>(mg/L) | Maximum<br>Effluent<br>Level<br>(mg/L) | Average<br>Percent<br>Reduction | Minimum<br>Percent<br>Reduction | USEPA<br>MCL<br>(mg/L) | Influent<br>Challenge<br>Concentration<br>(mg/L) | Maximum Permissible<br>Product Water<br>Concentrations<br>(mg/L) | Percent Reduction<br>Requirement |
| Nitrate/Nitrite<br>both as N | 50                     | 0.75            | 75.2                | 7.75 |  |  |  |                                 |                                 | 10.0                   | 30.0±10%   | 10.0   |                                  |
| Nitrate-N                    | 50                     | 0.75            | 75.2                | 7.75 | 28                                     | 5.4                                    | 7.8                                    | 80.71                           | 72.14                           | 10.0                   | 27.0±10%   | 10.0   |                                  |
| Nitrite-N                    | 50                     | 0.75            | 75.2                | 7.75 | 3.1                                    | 0.55                                   | 0.67                                   | 82.26                           | 78.39                           | 1.0                    | 3.0±10%  | 1.0  |                                  |
| TDSA                         | 50                     | 0.75            | 77                  | 6.42 | 761                                    | 24.07                                  | 29                                     | 96.8                            | 96.18                           | 500                    | 750±40 mg/L                                      | 187  |                                  |

Model Name: Drinking Water System Plus Deluxe GX or VX with Standard Tank

Discharge Water/Product Water Ratio: 3 to 1

| Product Water P              | Product Water Production Rate (Daily Production Rate) 19.75 gpd (74.76 Lpd) Efficiency Rating <sup>1</sup> : 25.94%, Recovery Rating <sup>2</sup> : 40.25% |                    |                     |      |  |  |  |                                 |                                 |                        |  |  |                                  |
|------------------------------|--|--------------------|---------------------|------|--|--|--|---------------------------------|---------------------------------|------------------------|--|--|----------------------------------|
| SUBSTANCE                    | Test Pressure<br>(psi)   | Flow Rate<br>(gpm) | Temperature<br>(°F) | рН   | Average<br>Influent<br>Level<br>(mg/L) | Average<br>Effluent<br>Level<br>(mg/L) | Maximum<br>Effluent<br>Level<br>(mg/L) | Average<br>Percent<br>Reduction | Minimum<br>Percent<br>Reduction | USEPA<br>MCL<br>(mg/L) | Influent<br>Challenge<br>Concentration<br>(mg/L) | Maximum<br>Permissible Product<br>Water Concentrations<br>(mg/L) | Percent Reduction<br>Requirement |
| Nitrate/Nitrite<br>both as N | 50   | 0.75               | 75.2                | 7.75 |  |  |  |                                 |                                 | 10.0                   | 30.0±10%   | 10.0   |                                  |
| Nitrate-N                    | 50   | 0.75               | 75.2                | 7.75 | 28                                     | 5.4                                    | 7.8                                    | 80.71                           | 72.14                           | 10.0                   | 27.0±10%   | 10.0   |                                  |
| Nitrite-N                    | 50   | 0.75               | 75.2                | 7.75 | 3.1                                    | 0.55                                   | 0.67                                   | 82.26                           | 78.39                           | 1.0                    | 3.0±10%  | 1.0  |                                  |
| TDSA                         | 50   | 0.75               | 77                  | 6.09 | 766                                    | 82.2                                   | 89                                     | 89.2                            | 88.4                            | 500                    | 750±40 mg/L                                      | 187  |                                  |

A - TDS is commonly comprised of calcium, magnesium, sodium, iron, manganese, bicarbonate, chloride, sulfate and carbonate

1 - 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.

2 - 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.



#### PERFORMANCE DATA SHEET Kinetico Drinking Water System Plus Deluxe Models

| VOCs Include:  | USEPA MCL<br>mg/L (ppm) | Influent Challenge<br>Concentration<br>mg/L (ppm) | Chemical Reduction<br>Percent | Maximum Permissible Product Water Concentration mg/L (ppm) |
|--|-------------------------|---|-------------------------------|--|
| alachlor   | 0.002                   | 0.050   | >98                           | 0.001  |
| atrazine   | 0.003                   | 0.10  | >97                           | 0.003  |
| benzene  | 0.005                   | 0.081   | >99                           | 0.001  |
| carbofuran   | 0.04                    | 0.190   | >99                           | 0.001  |
| carbon tetrachloride   | 0.005                   | 0.078   | 98                            | 0.0018   |
| chlorobenzene  | 0.1                     | 0.077   | >99                           | 0.001  |
| chloropicrin   |                         | 0.015   | 99                            | 0.0002   |
| 2,4-D  | 0.07                    | 0.110   | 98                            | 0.0017   |
| dibromochloropropane (DBCP)  | 0.0002                  | 0.052   | >99                           | 0.00002  |
| o-dichlorobenzene  | 0.6                     | 0.080   | >99                           | 0.001  |
| p-dichlorobenzene  | 0.075                   | 0.040   | >98                           | 0.001  |
| 1,2-dichloroethane   | 0.005                   | 0.088   | 95                            | 0.0048   |
| 1,1-dichloroethylene   | 0.003                   | 0.083   | >99                           | 0.0048   |
| ,  | 0.007                   | +   | >99                           | 0.0005   |
| cis-1,2-dichloroethylene<br>trans-1,2-dichloroethylene   | 0.07                    | 0.170   | >99                           | 0.0005   |
| , ,  |                         | 0.086   |                               | <del> </del>   |
| 1,2-dichloropropane  | 0.005                   | 0.080   | >99                           | 0.001  |
| cis-1,3-dichloropropylene  |                         | 0.079   | >99                           | 0.001  |
| dinoseb  | 0.007                   | 0.170   | 99                            | 0.0002   |
| endrin   | 0.002                   | 0.053   | 99                            | 0.00059  |
| ethylbenzene   | 0.7                     | 0.088   | >99                           | 0.001  |
| ethylene dibromide (EDB)   | 0.00005                 | 0.044   | >99                           | 0.00002  |
| haloacetonitriles (HAN): bromochloroacetronitrile dibromoacetonitrile dichloroacetonitrile trichloroacetonitrile |                         | 0.022<br>0.024<br>0.0096<br>0.015                 | 98<br>98<br>98<br>98          | 0.0005<br>0.0006<br>0.0002<br>0.0003                       |
| haloketones (HK)<br>1,1-dichloro-2-propanone<br>1,1,1-trichloro-2-propanone                                      |                         | 0.0072<br>0.0082                                  | 99<br>96                      | 0.0001<br>0.0003   |
| heptachlor   | 0.0004                  | 0.25  | >99                           | 0.00001  |
| heptachlor epoxide   | 0.0002                  | 0.0107  | 98                            | 0.0002   |
| hexachlorobutadiene  |                         | 0.044   | >98                           | 0.001  |
| hexachlorocyclopentadiene  | 0.05                    | 0.06  | >99                           | 0.000002   |
| lindane  | 0.0002                  | 0.055   | >99                           | 0.00001  |
| methoxychlor   | 0.04                    | 0.05  | >99                           | 0.0001   |
| pentachlorophenol  | 0.001                   | 0.096   | >99                           | 0.001  |
| simazine   | 0.004                   | 0.12  | >97                           | 0.004  |
| styrene  | 0.1                     | 0.15  | >99                           | 0.0005   |
| 1,1,2,2-tetrachloroethane  |                         | 0.081   | >99                           | 0.001  |
| tetrachloroethylene  | 0.005                   | 0.081   | >99                           | 0.001  |
| toluene  | 1.0                     | 0.078   | >99                           | 0.001  |
| 2,4,5- TP (silvex)   | 0.05                    | 0.27  | 99                            | 0.0016   |
| tribromoacetic acid  |                         | 0.042   | >98                           | 0.001  |
| 1,2,4-trichlorobenzene   | 0.07                    | 0.16  | >99                           | 0.0005   |
| 1,1,1-trichloroethane  | 0.2                     | 0.084   | 95                            | 0.0046   |
| 1,1,2-trichloroethane  | 0.005                   | 0.15  | >99                           | 0.0005   |
| trichloroethylene  | 0.005                   | 0.15  | >99                           | 0.0003   |
| · · · · · · · · · · · · · · · · · · ·  |                         | +   |                               | <del> </del>   |
| trihalomethanes (surrogate chemical)   | 0.080                   | 0.300   | 95<br>>99                     | 0.015<br>0.001   |



#### **Pentavalent Arsenic Treatment System Facts**

This system has been tested for the treatment of water containing pentavalent arsenic (also known as As(V), As(+5), and arsenate) at concentrations of 0.30 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.

Arsenic (abbreviated As) is found naturally in some well water. 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. Your local health department or state environmental health agency can provide a list of certified labs. The cost is typically \$15 to \$30. You can find information about arsenic in water on the Internet at the US Environmental Protection Agency website: 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. Labs require special sampling procedures 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) water treatment systems do not remove trivalent arsenic from water very well. RO systems are very effective at removing pentavalent arsenic. 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 Drinking Water System Plus Deluxe is designed to remove pentavalent arsenic. It will not convert trivalent arsenic to pentavalent arsenic. The system was tested in a lab. Under those conditions, the system reduced 0.30 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.

You must periodically replace the RO component\* of the Drinking Water System Plus Deluxe to ensure the system will continue to remove pentavalent arsenic. The component identification and locations where you can purchase the component are listed in this Performance Data Sheet, the Owner's Manual and the installation instructions for your system.

In most drinking water sources, the inorganic form of arsenic tends to be more predominant than organic forms. Inorganic arsenic in drinking water can exert toxic effects after acute (short-term) or chronic (long-term) exposure. Although acute exposures to high doses of inorganic arsenic can cause adverse effects, such exposures do not occur from public water supplies in the U.S. at the current MCL of 50 µg/L. EPA's proposed drinking water regulation addresses the long-term, chronic effects of exposure to low concentrations of inorganic arsenic in drinking water. Chronic effects at low concentrations include:

- · Cancer Effects: skin, bladder, lung and prostate cancer
- Non-cancer Effects: skin, pigmentation and keratosis, (callus-like skin growths seen earliest and most often), gastrointestinal, cardiovascular, hormonal (e.g. diabetes), hematological (e.g. anemia), pulmonary, neurological, immunological, reproductive/developmental functions

The contamination of a drinking water source by arsenic can result from either natural or human activities. Arsenic is an element that occurs naturally in rocks and soil, water, air, plants and animals. Volcanic activity, the erosion of rocks and minerals and forest fires are natural sources that can release arsenic into the environment. Although about 90 percent of the arsenic used by industry in the United States is used for wood preservative purposes, arsenic is also used in paints, drugs, dyes, soaps, metals and semi-conductors. Burning fossil fuels and wastes, paper production, glass manufacturing, cement manufacturing, mining and smelting can also release arsenic. While arsenic can no longer be used in making pesticides, weed killers and embalming fluids, the Agency is aware that prior to this ban these substances have contributed to drinking water contamination.

<sup>\*</sup> See Warranty coverage on page 2.



Kinetico Drinking Water System Plus Deluxe models will reduce the levels of certain substances in drinking water. These substances are not necessarily in your water. Because we make these claims, the attached information was compiled to help you better understand how these products will perform in your home.

Contaminant reduction tests were conducted by NSF International in accordance with the testing protocols of the United States Environmental Protection Agency (USEPA). Given certain influent levels, the Kinetico Drinking Water Plus Deluxe will reduce the contaminant levels below those set by the USEPA. These products conform to the Drinking Water Standards of your state. If you would like more information, contact your authorized Kinetico dealer.

Please sign below to verify that you've read and understand the attached information.

#### **CONSUMER COPY**

| CONSUMER                              | AUTHORIZED KINETICO DE      |
|---------------------------------------|-----------------------------|
| Signature                             | Signature                   |
| Name (please print)                   | Salesperson's Name (pleas   |
| Address                               | Dealer's Name               |
| City, State/Province, Zip/Postal Code | Dealer's Address            |
|                                       | City, State/Province, Zip/F |
|                                       | Dealer's Phone Number       |
|                                       |                             |
|                                       |                             |
|                                       |                             |

| AUTHORIZED KINETICO DEALER REPRESENTATIVE |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|
|   |  |  |  |  |  |  |  |
| Signature                                 |  |  |  |  |  |  |  |
| Salesperson's Name (please print)         |  |  |  |  |  |  |  |
| Dealer's Name                             |  |  |  |  |  |  |  |
| Dealer's Address                          |  |  |  |  |  |  |  |
| City, State/Province, Zip/Postal Code     |  |  |  |  |  |  |  |
| Dealer's Phone Number                     |  |  |  |  |  |  |  |
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Kinetico Drinking Water System Plus Deluxe models will reduce the levels of certain substances in drinking water. These substances are not necessarily in your water. Because we make these claims, the attached information was compiled to help you better understand how these products will perform in your home.

Contaminant reduction tests were conducted by NSF International in accordance with the testing protocols of the United States Environmental Protection Agency (USEPA). Given certain influent levels, the Kinetico Drinking Water Plus Deluxe will reduce the con-taminant levels below those set by the USEPA. These products conform to the Drinking Water Standards of your state. If you would like more information, contact your authorized Kinetico dealer.

Please sign below to verify that you've read and understand the attached information.

#### **DEALER COPY**

| CONSUMER                              | AUTHORIZED KINETICO DEALER REPRESENTATIVE |
|---------------------------------------|---|
| Signature                             | Signature                                 |
| Name (please print)                   | Salesperson's Name (please print)         |
| Address                               | Dealer's Name                             |
| City, State/Province, Zip/Postal Code | Dealer's Address                          |
|                                       | City, State/Province, Zip/Postal Code     |
|                                       | Dealer's Phone Number                     |
|                                       |   |
|                                       |   |
|                                       |   |

#### Water Treatment Device Certificate Number

05 - 1723

Date Issued: June 14, 2005

#### **Trademark/Model Designation**

Kinetico Drinking Water System Plus VX Deluxe with Standard Tank

#### **Replacement Elements**

Membrane #10501 Sediment Prefilter #9309 Carbon/Sediment Prefilter #9461 VOC Postfilter #9307

Manufacturer: Kinetico Incorporated

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 Turbidity Fluoride Lead Nitrate/Nitrite¹ Organic Contaminants MTBE VOCs

Rated Service Capacity: N/A Rated Service Flow: 19.8 gpd

#### **Conditions of Certification:**

Do not use where water is microbiologically unsafe or with water of unknown quality, except that systems certified for cyst reduction may be used on disinfected waters that may contain filterable cysts.

<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.

<sup>&</sup>lt;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.

#### Water Treatment Device Certificate Number

05 - 1724

Date Issued: June 14, 2005

#### Trademark/Model Designation

Kinetico Drinking Water System Plus VX Deluxe with 3 gal Quick Flo

#### **Replacement Elements**

Membrane #10501 Sediment Prefilter #9309 Carbon/Sediment Prefilter #9461 VOC Postfilter #9307

Manufacturer: Kinetico Incorporated

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
Turbidity

Organic Contaminants

MTBE
VOCs

Turbidity

Inorganic/Radiological Contaminants

Cadmium
Fluoride
Lead
Nitrate/Nitrite

Nitrate/Normality

Nitrate/Nitrite

Rated Service Capacity: N/A Rated Service Flow: 35.5 gpd

#### **Conditions of Certification:**

Do not use where water is microbiologically unsafe or with water of unknown quality, except that systems certified for cyst reduction may be used on disinfected waters that may contain filterable 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.

#### Water Treatment Device Certificate Number

05 - 1725

Date Issued: June 14, 2005

#### Trademark/Model Designation

Kinetico Drinking Water System Plus GX Deluxe with Standard Tank

#### **Replacement Elements**

Membrane #10501 Sediment Prefilter #9309 Carbon/Sediment Prefilter #9461 Postfilter #9306

Manufacturer: Kinetico Incorporated

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 Turbidity Pluoride Nitrate/Nitrite Organic Contaminants None

Rated Service Capacity: N/A Rated Service Flow: 19.8 gpd

#### **Conditions of Certification:**

Do not use where water is microbiologically unsafe or with water of unknown quality, except that systems certified for cyst reduction may be used on disinfected waters that may contain filterable cysts.

<sup>1</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.

#### Water Treatment Device Certificate Number

05 - 1726

Date Issued: June 14, 2005

#### Trademark/Model Designation

Kinetico Drinking Water System Plus GX Deluxe with 3 gal Quick Flo

#### **Replacement Elements**

Membrane #10501 Sediment Prefilter #9309 Carbon/Sediment Prefilter #9461 Postfilter #9306

Manufacturer: Kinetico Incorporated

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
Turbidity

Organic Contaminants
None

Inorganic/Radiological Contaminants
Cadmium
Fluoride
Nitrate/Nitrite¹

Rated Service Capacity: N/A Rated Service Flow: 35.5 gpd

#### **Conditions of Certification:**

Do not use where water is microbiologically unsafe or with water of unknown quality, except that systems certified for cyst reduction may be used on disinfected waters that may contain filterable cysts.

<sup>1</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.

#### Water Treatment Device Certificate Number

05 - 1577

Date Issued: June 14, 2005

#### **Trademark/Model Designation**

Kinetico Drinking Water System Plus GX Deluxe with 1 gal Quick Flo

#### **Replacement Elements**

Membrane #10501 Sediment Prefilter #9309 or Carbon/Sediment Prefilter #9461 Postfilter #9306

Manufacturer: Kinetico Incorporated

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
Turbidity

Organic Contaminants
None

Inorganic/Radiological Contaminants

Cadmium
Fluoride
Nitrate/Nitrite¹

Rated Service Capacity: not applicable Rated Service Flow: 32.5 gpd

#### **Conditions of Certification:**

Do not use where water is microbiologically unsafe or with water of unknown quality, except that systems certified for cyst reduction may be used on disinfected waters that may contain filterable cysts.

<sup>1</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.

#### Water Treatment Device Certificate Number

05 - 1578

Date Issued: June 14, 2005

#### **Trademark/Model Designation**

Kinetico Drinking Water System Plus VX Deluxe with 1 gal Quick Flo

#### **Replacement Elements**

Membrane #10501 Sediment Prefilter #9309 or Carbon/Sediment Prefilter #9461 VOC Postfilter #9307

Manufacturer: Kinetico Incorporated

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

**Turbidity** 

**Organic Contaminants** 

MTBE VOCs

#### **Inorganic/Radiological Contaminants**

Cadmium

Fluoride

Lead

Nitrate/Nitrite

Rated Service Capacity: 500 gal Rated Service Flow: 32.5 gpd

#### **Conditions of Certification:**

Do not use where water is microbiologically unsafe or with water of unknown quality, except that systems certified for cyst reduction may be used on disinfected waters that may contain filterable cysts.

<sup>1</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.