Purolite®

# PRODUCT DATA SHEET

## UltraClean™ UCW3700

UltraClean Mixed Bed Resin for High Purity Water

**UltraClean™ UCW3700** mixed bed resin is ready to use, 1:1 chemical equivalent that is highly regenerated in the H+ and OH- forms. **UltraClean UCW3700** resins are manufactured by a proprietary process that achieves the high purity for ultra-pure water applications for the micro-electronics and semi-conductor industry (May also be suitable for special applications in pharmaceuticals). The cation and anion used in **UltraClean UCW3700** are gel resins that are polymerized with a styrene-divinylbenzene matrix and functionalized. The resin beads are highly durable and resist fragmentation that can result in particle release in the treated water. In regenerable mixed beds, separation of cation-anion during backwashing is critical to prevent cross contamination of the resin with the wrong regenerant. Air mixing and, in some cases, resin transfer for external regeneration could also be tedious operations, if the wrong resin selection is made. **UltraClean UCW3700** is specifically designed to meet these challenges, every time it is regenerated. Use of **UltraClean UCW3700** also negates the need for an inert, providing more operating capacity to your working mixed bed.

### TYPICAL PHYSICAL AND CHEMICAL CHARACTERISTICS

**BASIC FEATURES:**

| | |
|---|---|
| **Application** | UltrapureWater Mixed Bed Resin |
| **Polymer Structure** | Gel polystrene crosslinked with divinylbenzene |
| **Appearance** | Spherical beads |
| **Functional Group** | Sulfonic Acid and Type 1 Quaternary Ammonium |
| **Ionic Form as Shipped** | $H^+$ / $OH^-$ |

**PRODUCT INFORMATION:**

| | **Cation** | **Anion** |
|---|---|---|
| **Component** | UltraClean Grade Gel Cation | UltraClean Grade Gel Type 1 Anion |
| **Cation / Anion Chemical Equivalent Ratio** | 1 | 1 |
| **Total Capacity (min.)** | 1.9 eq/l (41.5 Kgr/ft$^3$ ($H^+$ form)) | 1.0 eq/l (21.8 Kgr/ft$^3$ ($OH^-$ form)) |
| **Conversion (min.)** | 99.9 % ($H^+$ form) | 95 % ($OH^-$ form) |
| **Moisture Retention** | 49 - 54 % ($H^+$ form) | 60 - 70 % ($OH^-$ form) |
| **Mean Diameter** | 610 ± 40 µm | 570 ± 50 µm |
| **Uniformity Coefficient (max.)** | 1.2 | 1.2 |
| **Resistivity** | >18 MΩ•cm after 15BV rinse at 30 BV/h * | |
| **TOC** | <10 ppb Δ TOC after 40 BV of rinse at 30 BV/h (*) | |
| **Shipping Weight (approx.)** | 685 - 725 g/l (42.7 - 45.2 lb/ft$^3$) | |
| **Temperature Limit** | 60°C (140°F) | |

* Influent rinse water quality : > 17.5 MΩ.cm; < 2 ppb TOC

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