

QuantumPure™

Product Data Sheet

Premium SBA IX Resins with Uniform Particle Size

LG QuantumPure™ offers a comprehensive range of high-performance Ion Exchange (IX) resins, designed to meet a wide range of water treatment needs from deionization and softening to selective ion removal. Produced using state-of-the-art manufacturing processes, LG QuantumPure™ IX resins deliver consistent quality, excellent chemical resistance, and extended service life, reducing the need for frequent replacements and maintenance.



Key Features

- Uniform particle size (uniformity coefficient is below 1.1)
- High reactivity and strong ion adsorption
- Operable in all pH ranges
- Excellent physical properties



Key Benefits

- Highly efficient exchange capacity
- Longer service cycle
- Broader range of operation
- Minimum pressure drop



Key Applications

- Silica and organic removal
- Demineralization by anion removal
- Condensate polishing
- Mixed bed system with SAC

Physical and Chemical Properties

| Product Name | QuantumPure™ UA-10 | QuantumPure™ UA-10 OH | QuantumPure™ UA-12 | QuantumPure™ UA-12 OH | QuantumPure™ UA-20 |
|--|-----------------------------|-----------------------|--------------------|----------------------------------|--------------------|
| Matrix | Styrene-divinylbenzene, Gel | | | | |
| Functional Group | Type 1 (Trimethylammonium) | | | Type 2 (Dimethylethanolammonium) | |
| Ionic Form | Cl ⁻ | OH ⁻ | Cl ⁻ | Na ⁺ | Cl ⁻ |
| Shipping Weight (g/l)* | 670 | 655 | 670 | 660 | 690 |
| Specific Gravity* | 1.08 | 1.07 | 1.08 | 1.07 | 1.11 |
| Average Diameter (µm) | 550±50 | 590±50 | 575±50 | 620±50 | 500±100 |
| Total Capacity (eq/l) | 1.35 | 1.10 | 1.30 | 1.00 | 1.30 |
| Moisture Retention (%) | 43–49 | 59–65 | 49–55 | 62–70 | 45–51 |
| Uniformity Coefficient | ≤1.1 | ≤1.1 | ≤1.1 | ≤1.1 | ≤1.1 |
| Swelling Rate (Cl ⁻ →OH ⁻ , %) | 23 | 23 | 24 | 24 | 14 |

Regeneration Specifications

| | | | | | |
|------------------------|--------|--------|--------|--------|--------|
| Regenerant | NaOH | NaOH | NaOH | NaOH | NaOH |
| Concentration (%) | 2–8 | 2–8 | 2–8 | 2–8 | 2–8 |
| Level (g/l) | 50–150 | 50–150 | 50–150 | 50–150 | 50–150 |
| Flow Rate (m/h) | 2–8 | 2–8 | 2–8 | 2–8 | 2–8 |
| Rinse Requirement (BV) | 2–8 | 2–8 | 2–6 | 2–6 | 2–8 |

Recommended Operating Conditions

| | | | | | |
|--------------------------|--|--|--|--|---|
| Operating Temp (°C) [°F] | OH ⁻ : 60 [140] Cl ⁻ : 80 [176] | OH ⁻ : 60 [140] Cl ⁻ : 80 [176] | OH ⁻ : 60 [140] Cl ⁻ : 80 [176] | OH ⁻ : 60 [140] Cl ⁻ : 80 [176] | 40 (OH ⁻), 60 (Cl ⁻) |
| Min. Bed Depth (mm) | 800 | 800 | 800 | 800 | 800 |
| pH Range | 0–14 | 0–14 | 0–14 | 0–14 | 0–14 |
| Service Flow Rate (m/h) | 5–120 | 5–150 | 5–60 | 5–60 | 5–60 |

Feed Water Limitations

| | |
|-----------------------|-------------------|
| Free Chlorine | Not Traceable |
| Turbidity | Less than 2 NTU |
| Iron and Heavy Metals | Less than 0.1 ppm |

*The values specified are for reference only and does not guarantee performance.

The product performance is expressly conditioned on Buyer's storing, installing, operating, and maintaining Product in accordance with industry accepted good practices and Seller's written instructions provided in the Seller's Technical Manual may be viewed and downloaded at www.lgwatersolutions.com information and data contained herein are Deemed to be accurate and reliable and are offered in good faith, but without guarantee of performance. LG Chem assumes no liability for results obtained or damages incurred

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