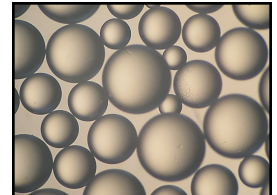


AmberLite™ IRA402 Cl Ion Exchange Resin

Gaussian, Gel, Strong Base Anion Exchange Resin for Industrial Demineralization Applications

Description

AmberLite™ IRA402 Cl Ion Exchange Resin is a general-purpose demineralization resin with a long-established track record of reliable performance in the industry. This industry-staple resin is designed to provide excellent balance of properties for capacity, strength, silica selectivity, and a long lifetime for co-flow regenerated systems in variety of industrial water treatment applications.



Applications

- Demineralization
 - Ideally when treating water with:
 - High percentage of silica
 - When the treatment goal is:
 - Removal of strong and weak acids
 - Lowest silica leakage

System Designs

- Co-current

Typical Properties

Physical Properties	
Copolymer	Styrene-divinylbenzene
Matrix	Gel
Type	Strong base anion, Type I
Functional Group	Trimethylammonium
Physical Form	Amber, translucent, spherical beads
Chemical Properties	
Ionic Form as Shipped	Cl ⁻
Total Exchange Capacity	≥ 1.20 eq/L (Cl ⁻ form)
Water Retention Capacity	49.0 – 59.0% (Cl ⁻ form)
Particle Size §	
Particle Diameter	600 – 750 μm
Uniformity Coefficient	≤ 1.80
< 300 μm	≤ 1.0%
> 1180 μm	≤ 5.0%
Stability	
Whole Uncracked Beads	≥ 90%
Swelling	Cl ⁻ → OH ⁻ ≤ 20%
Density	
Particle Density	1.07 g/mL
Shipping Weight	670 g/L

§ For additional particle size information, please refer to the [Particle Size Distribution Cross Reference Chart](#) (Form No. 45-D00954-en).

Suggested Operating Conditions

Temperature Range	
OH ⁻ form †	5 – 60°C (41 – 140°F)
Cl ⁻ form	5 – 100°C (41 – 212°F)
pH Range	
Service Cycle	1 – 14
Stable	0 – 14

† Operating at elevated temperatures, for example above 60 – 70°C (140 – 158°F), may impact resin life. Contact our technical representative for details.

For additional information regarding recommended minimum bed depth, operating conditions, and regeneration conditions for [separate beds](#) (Form No. 45-D01131-en) in water treatment, please refer to our Tech Fact.

Hydraulic Characteristics

Estimated bed expansion of AmberLite™ IRA402 Cl Ion Exchange Resin as a function of backwash flowrate and temperature is shown in Figure 1.

Estimated pressure drop for AmberLite™ IRA402 Cl as a function of service flowrate and temperature is shown in Figure 2. These pressure drop expectations are valid at the start of the service run with clean water and a well-classified bed.

Figure 1: Backwash Expansion

Temperature = 10 – 60°C (50 – 140°F)

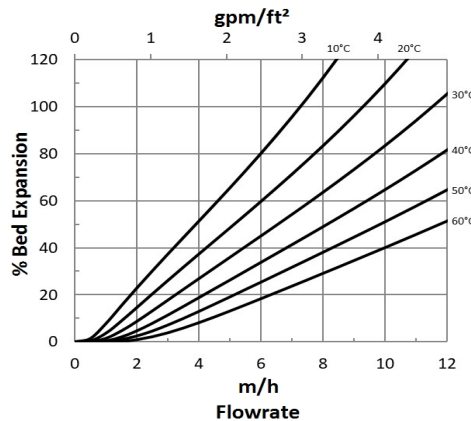
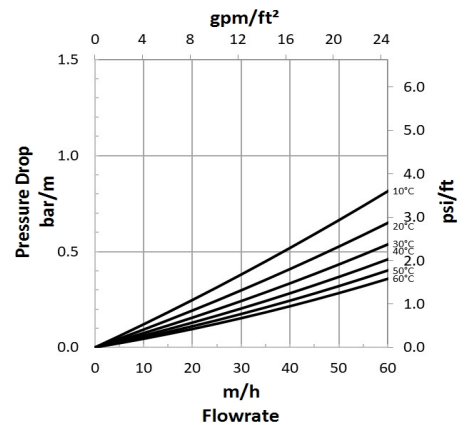


Figure 2: Pressure Drop

Temperature = 10 – 60°C (50 – 140°F)



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Customer Notice

DuPont strongly encourages its customers to review both their manufacturing processes and their applications of DuPont products from the standpoint of human health and environmental quality to ensure that DuPont products are not used in ways for which they are not intended or tested. DuPont personnel are available to answer your questions and to provide reasonable technical support. DuPont product literature, including safety data sheets, should be consulted prior to use of DuPont products. Current safety data sheets are available from DuPont.

Please be aware of the following:

- **WARNING:** Oxidizing agents such as nitric acid attack organic ion exchange resins under certain conditions. This could lead to anything from slight resin degradation to a violent exothermic reaction (explosion). Before using strong oxidizing agents, consult sources knowledgeable in handling such materials.

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