



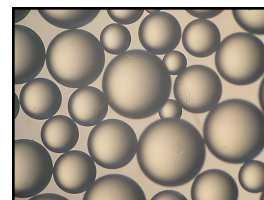
## Product Data Sheet

### DuPont™ AmberLite™ IRA402 Cl Ion Exchange Resin

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

#### Description

DuPont™ 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 <sup>-</sup>
Total Exchange Capacity	≥ 1.20 eq/L (Cl <sup>-</sup> form)
Water Retention Capacity	49.0 – 59.0% (Cl <sup>-</sup> 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 <sup>-</sup> → OH <sup>-</sup> ≤ 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 <sup>-</sup> form ‡	5 – 60°C (41 – 140°F)
Cl <sup>-</sup> 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.

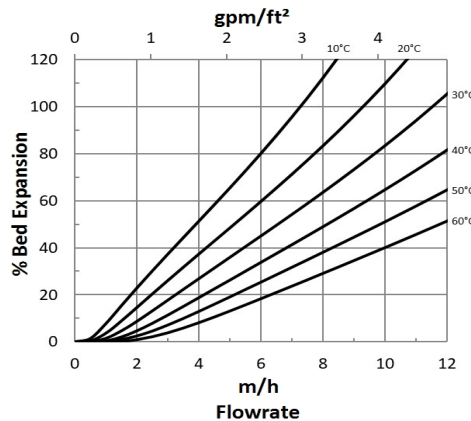
## Hydraulic Characteristics

Estimated bed expansion of DuPont™ 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.

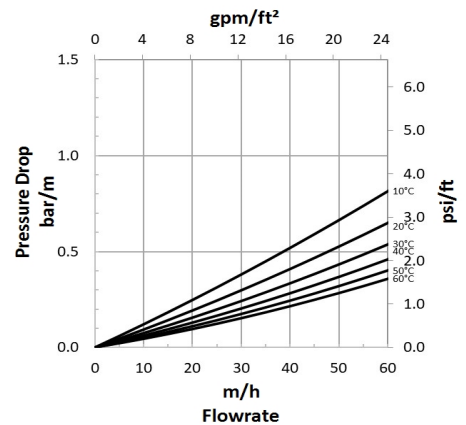
**Figure 1: Backwash Expansion**

Temperature = 10 – 60°C (50 – 140°F)



**Figure 2: Pressure Drop**

Temperature = 10 – 60°C (50 – 140°F)



## Product Stewardship

DuPont has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with DuPont products—from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

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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.

Have a question? Contact us at:

[www.dupont.com/water/contact-us](http://www.dupont.com/water/contact-us)

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