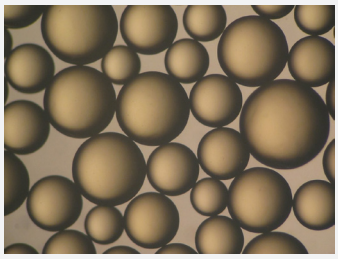
# DuPont™ AmberLite™ IRC120 H Ion Exchange Resin

## Gaussian, Gel, Strong Acid Cation Exchange Resin for Industrial Demineralization Applications

### Description

DuPont™ AmberLite™ IRC120 H Ion Exchange Resin is a general-purpose demineralization resin with a long-established track record of reliable performance in the industry. This durable resin offers a good balance of capacity and strength resulting in long lifetime for co-flow regenerated systems in industrial water treatment.

AmberLite™ IRC120 Na Ion Exchange Resin is available for demineralization applications when the sodium-form is preferred by the user.



### Applications

- Demineralization

### System Designs

- Co-current

### Historical Reference

DuPont™ AmberLite™ IRC120 H Ion Exchange Resin has previously been sold as AmberLite™ IR120 H Ion Exchange Resin.

### Typical Properties

| | |
|---|---|
| **Physical Properties** | |
| Copolymer | Styrene-divinylbenzene |
| Matrix | Gel |
| Type | Strong acid cation |
| Functional Group | Sulfonic acid |
| Physical Form | Amber, translucent, spherical beads |
| **Chemical Properties** | |
| Ionic Form as Shipped | $H^+$ |
| Total Exchange Capacity | ≥ 1.80 eq/L ($H^+$ form) |
| Water Retention Capacity | 48.0 – 58.0% ($H^+$ form) |
| **Particle Size** [§] | |
| < 300 µm | ≤ 2.0% |
| > 1180 µm | ≤ 4.0% |

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

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| Stability | |
|---|---|
| Swelling | $Na^+ \rightarrow H^+ \leq 11\%$ |
| **Density** | |
| Particle Density | 1.19 g/mL |
| Shipping Weight | 800 g/L |
| **Suggested Operating Conditions** | |
| Temperature Range ($H^+$ form) | 5 – 120°C (41 – 248°F) |
| pH Range | |
| Service Cycle | 1 – 14 |
| Stable | 0 – 14 |

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™ IRC120 H Ion Exchange Resin as a function of backwash flowrate and temperature is shown in Figure 1.

Estimated pressure drop for AmberLite™ IRC120 H 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)

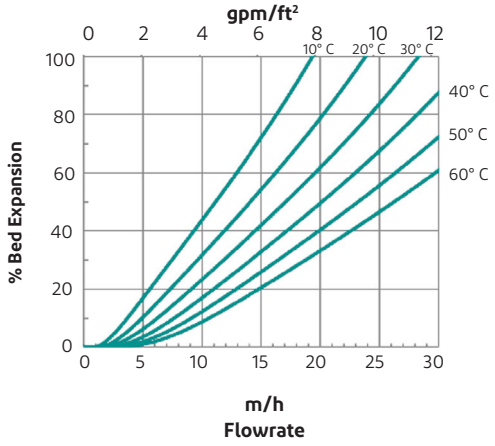
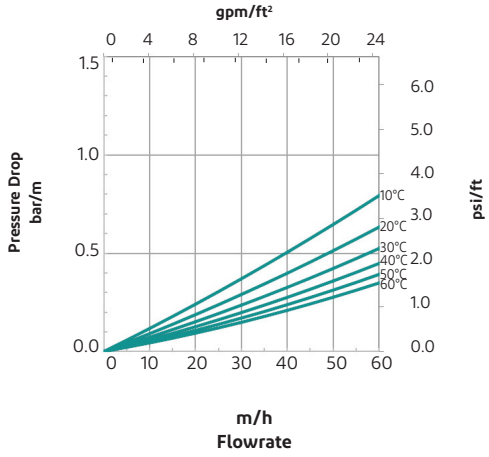



**Figure 2. Pressure Drop**
Temperature = 10 – 60°C (50 – 140°F)



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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 ourenvironment. The success of our product stewardship program rests with each and everyindividual involved with DuPont products—from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

## 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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**Have a question? Contact us at:**
**dupont.com/water/contact-us**

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