



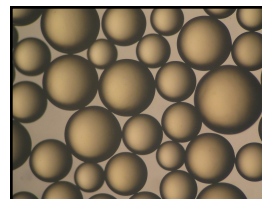
Product Data Sheet

AmberLite™ IRC120 Na Ion Exchange Resin

Gaussian, Gel, Strong Acid Cation Exchange Resin for Industrial Softening Applications

Description

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

Applications

- Industrial softening
- Demineralization (when the sodium-form is preferred by the user)

System Designs

- Co-current

Historical Reference

AmberLite™ IRC120 Na Ion Exchange Resin has previously been sold as AmberLite™ IR120 Na 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	Na ⁺
Total Exchange Capacity	≥ 2.0 eq/L (Na ⁺ form)
Water Retention Capacity	42.0 – 49.0% (Na ⁺ form)

Particle Size §

< 300 µm	≤ 2.0%
> 1180 µm	≤ 4.0%

Stability

Swelling	Na ⁺ → H ⁺ ≤ 11%
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Density

Particle Density	1.27 g/mL
Shipping Weight	820 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 (Na ⁺ form)	5 – 150°C (41 – 302°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 AmberLite™ IRC 120 Na Ion Exchange Resin as a function of backwash flowrate and temperature is shown in Figure 1.

Estimated pressure drop for AmberLite™ IRC 120 Na 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)

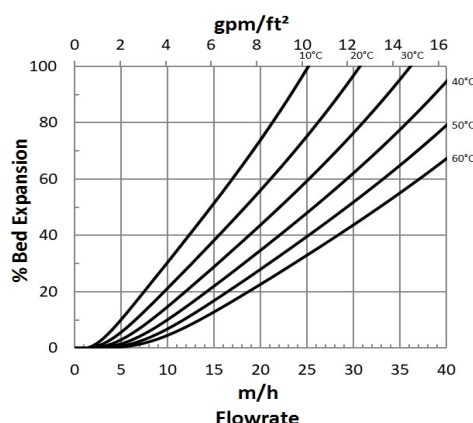
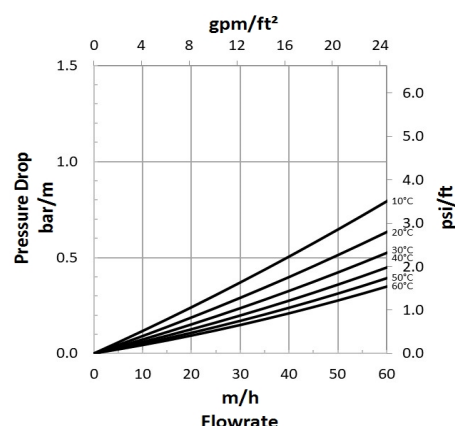


Figure 2: Pressure Drop

Temperature = 10 – 60°C (50 – 140°F)



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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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