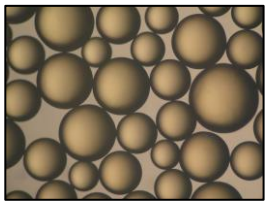
Product Data Sheet

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Historical Reference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 Physical and Chemical 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	≥ 1.90 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	$Na^+ \rightarrow H^+$ ≤ 11%
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. 177-01775).

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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. 177-03729) in water treatment, please refer to our Tech Fact.

Hydraulic Characteristics

Estimated bed expansion of AMBERLITE™ IRC120 Na Ion Exchange Resin as a function of backwash flowrate and temperature is shown in Figure 1.

Estimated pressure drop for AMBERLITE IRC120 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)

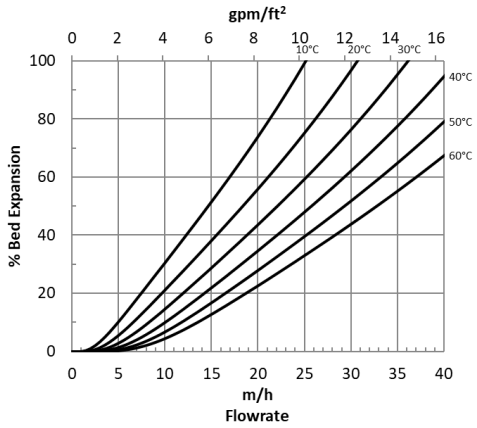
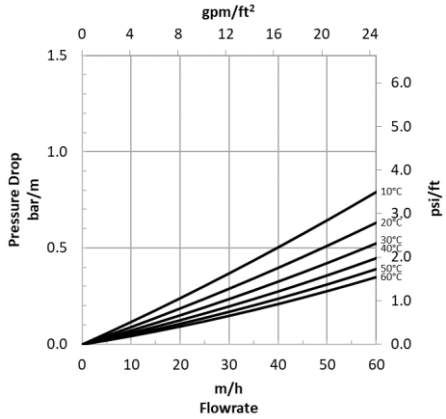


Figure 2: Pressure Drop

Temperature = 10 – 60°C (50 – 140°F)



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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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