

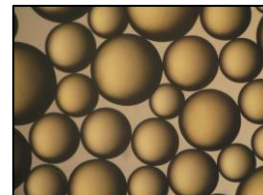


## AMBERLITE™ IRC120 H Ion Exchange Resin

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

### Description

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### Historical Reference

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

### Typical Physical and Chemical Properties\*\*

<b>Physical Properties</b>	
Copolymer	Styrene-divinylbenzene
Matrix	Gel
Type	Strong acid cation
Functional Group	Sulfonic acid
Physical Form	Amber, translucent, spherical beads
<b>Chemical Properties</b>	
Ionic Form as Shipped	H <sup>+</sup>
Total Exchange Capacity	≥ 1.80 eq/L (H <sup>+</sup> form)
Water Retention Capacity	48.0 – 58.0% (H <sup>+</sup> form)
<b>Particle Size</b> §	
< 300 µm	≤ 2.0%
> 1180 µm	≤ 4.0%
<b>Stability</b>	
Swelling	Na <sup>+</sup> → H <sup>+</sup> ≤ 11%
<b>Density</b>	
Particle Density	1.19 g/mL
Shipping Weight	785 g/L

§ For additional particle size information, please refer to the [Particle Size Distribution Cross Reference Chart](#) (Form No. 177-01775).

## Suggested Operating Conditions\*\*

Temperature Range (H <sup>+</sup> 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. 177-03729) in water treatment, please refer to our Tech Fact.

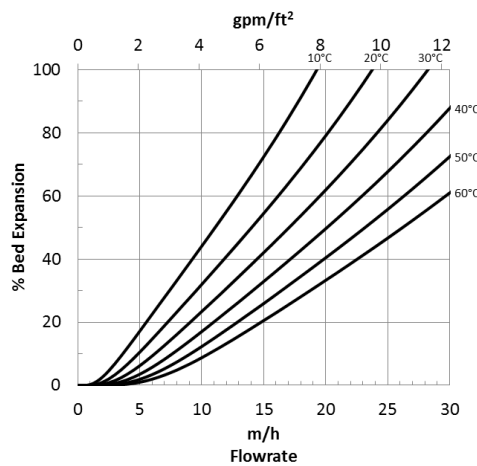
## Hydraulic Characteristics

Estimated bed expansion of 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.

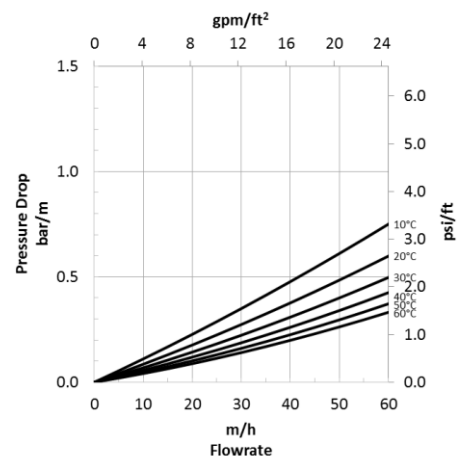
**Figure 1: Backwash Expansion**

Temperature = 10 – 60°C (50 – 140°F)



**Figure 2: Pressure Drop**

Temperature = 10 – 60°C (50 – 140°F)



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### For more information, contact our Customer Information Group:

Asia Pacific	+86 21 3851 4988
Europe, Middle East, Africa	+31 115 672626
Latin America	+55 11 5184 8722
North America	1-800-447-4369

[www.dowwaterandprocess.com](http://www.dowwaterandprocess.com)

**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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