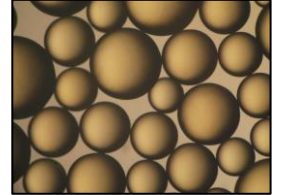# AMBERLITE™ IRC120 H Ion Exchange Resin

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Historical Reference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[**]

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	$\leq 2.0\%$
> 1180 µm	$\leq 4.0\%$
Stability	
Swelling	$Na^+ \rightarrow H^+ \leq 11\%$
Density	
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).

Form No. 177-03801, Rev. 0
May 2018

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 <u>separate beds</u> (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.

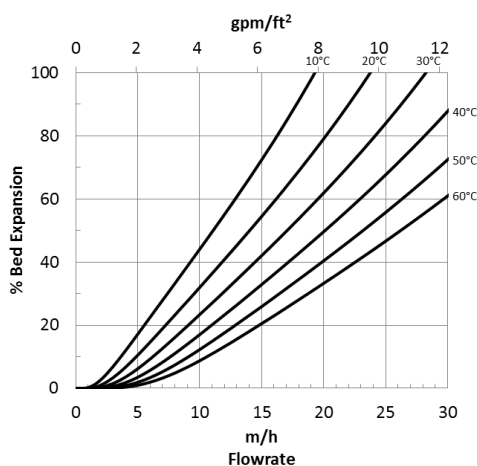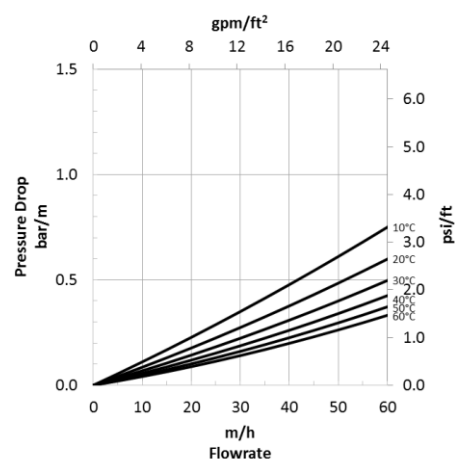### Figure 1: Backwash Expansion
Temperature = 10 – 60°C (50 – 140°F)

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

®™ Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

Product Stewardship

Dow 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 Dow products—from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

LENNTECH

info@lenntech.com   Tel. +31-152-610-900

www.lenntech.com   Fax. +31-152-616-289

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.

NOTICE: No freedom from infringement of any patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other government enactments. The product shown in this literature may not be available for sale and/or available in all geographies where Dow is represented. The claims made may not have been approved for use in all countries. Dow assumes no obligation or liability for the information in this document. References to "Dow" or the "Company" mean the Dow legal entity selling the products to Customer unless otherwise expressly noted. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

**All information set forth herein is for informational purposes only. This information is general information and may differ from that based on actual conditions. Please note that physical properties may vary depending on certain conditions and while operating conditions stated in this document are intended to lengthen product lifespan and/or improve product performance, it will ultimately depend on actual circumstances and is in no event a guarantee of achieving any specific results. Nothing in this document should be treated as a warranty by Dow.

DOW

®™ Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow