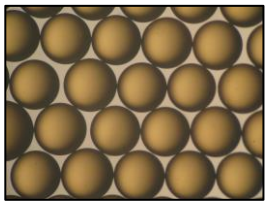
AMBERLITE™ HPR1200 Na Ion Exchange Resin

Uniform Particle Size, Gel, Strong Acid Cation Exchange Resin for Industrial Softening Applications

Description



AMBERLITE™ HPR1200 Na Ion Exchange Resin is a high-quality resin for use in industrial softening applications when high performance and cost-effective operation is required. The chemical properties and particle size of the resin have been optimized to help yield excellent operating capacity and rinse characteristics, while reducing chemical regenerant and rinse water usage.

AMBERLITE HPR1200 Na is compatible with all system technologies. It is available for demineralization applications when the sodium-form is preferred by the user. For more details on the use of this product for demineralization, refer to the product data sheet for AMBERLITE™ HPR1200 H Ion Exchange Resin.

Applications

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

System Designs

Compatible with all system technologies:

- Co-current
- Counter-current / Hold-down
- Packed beds
- Mixed beds

Historical Reference

AMBERLITE™ HPR1200 Na Ion Exchange Resin has previously been sold as DOWEX MARATHON™ 1200 Na Ion Exchange Resin.

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Typical Physical and Chemical Properties**

Physical Properties	
Copolymer	Styrene-divinylbenzene
Matrix	Gel
Type	Strong acid cation
Functional Group	Sulfonic acid
Physical Form	Dark brown, translucent, spherical beads
Chemical Properties	
Ionic Form as Shipped	Na^+
Total Exchange Capacity	≥ 2.0 eq/L (Na^+ form)
Water Retention Capacity	43.0 – 50.0% (Na^+ form)
Particle Size	
Particle Diameter §	585 ± 50 µm
Uniformity Coefficient	≤ 1.10
< 300 µm	≤ 0.1%
> 850 µm	≤ 3.0%
Stability	
Whole Uncracked Beads	≥ 95%
Swelling	$Ca^{2+} \rightarrow Na^+$: 5%
	$Na^+ \rightarrow H^+$: 8%
Density	
Particle Density	1.29 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).

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 mixed beds (Form No. 177-03705) or separate beds (Form No. 177-03729) in water treatment, please refer to our Tech Facts.

Hydraulic Characteristics

Estimated bed expansion of AMBERLITE™ HPR1200 Na Ion Exchange Resin as a function of backwash flowrate and temperature is shown in Figure 1.

Estimated pressure drop for AMBERLITE HPR1200 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.

Figure 1: Backwash Expansion

Temperature = 10 – 60°C (50 – 140°F)

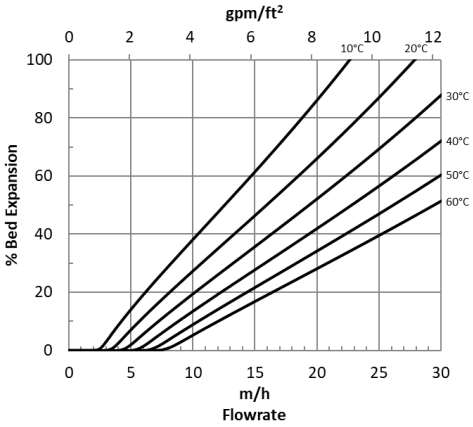
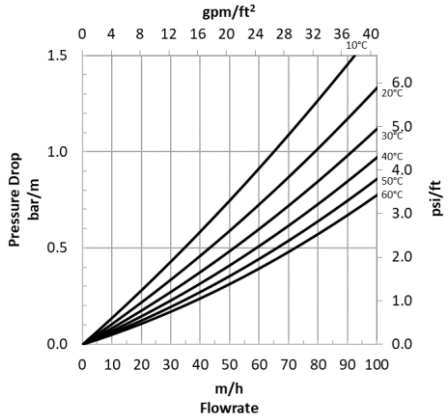


Figure 2: Pressure Drop

Temperature = 10 – 60°C (50 – 140°F)



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.

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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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