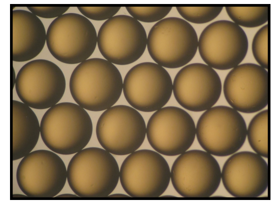
Product Data Sheet

AmberLite™ HPR1200 H Ion Exchange Resin

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

Description



AmberLite™ HPR1200 H Ion Exchange Resin is the go-to, high-quality resin for use in industrial demineralization 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 H is compatible with all system technologies; it has the flexibility to be used in both the lead cation bed and in mixed bed polishers, allowing users to inventory only one strong acid cation resin for their demineralization needs. In mixed bed applications, the dark color of this cation resin is designed to allow easy visual distinction from the light-colored anion resin following backwash separation.

AmberLite™ HPR1200 Na Ion Exchange Resin is available for industrial softening or demineralization applications when the sodium-form is preferred by the user.

Resin Pairings

Recommended pairing:

- AmberLite™ HPR4200 OH Ion Exchange Resin (gel)
- AmberLite™ HPR4800 OH Ion Exchange Resin (gel)

Additional pairing:

- AmberLite™ HPR4200 Cl Ion Exchange Resin (gel)
- AmberLite™ HPR4800 Cl Ion Exchange Resin (gel)
- AmberLite™ HPR4700 OH or Cl Ion Exchange Resin (gel)

Applications

- Demineralization
- Mixed bed polishing

System Designs

Compatible with all system technologies:

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

Historical Reference

AmberLite™ HPR1200 H Ion Exchange Resin has previously been sold as DOWEX MARATHON™ 1200 H Ion Exchange Resin.

Form No. 45-D01221-en, Rev. 1
December 2019

Typical 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	H^+
Total Exchange Capacity	≥ 1.8 eq/L (H^+ form)
Water Retention Capacity	50.0 – 56.0% (H^+ form)
Particle Size §	
Particle Diameter	600 ± 50 µm
Uniformity Coefficient	≤ 1.10
< 300 µm	≤ 0.1%
> 850 µm	≤ 3.0%
Stability	
Whole Uncracked Beads	≥ 95%
Swelling	$Na^+ \rightarrow H^+$: 8%
Density	
Particle Density	1.20 g/mL
Shipping Weight	785 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 (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 mixed beds (Form No. 45-D01127-en) or separate beds (Form No. 45-D01131-en) in water treatment, please refer to our Tech Facts.

Hydraulic Characteristics

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

Estimated pressure drop for AmberLite™ HPR1200 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.

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

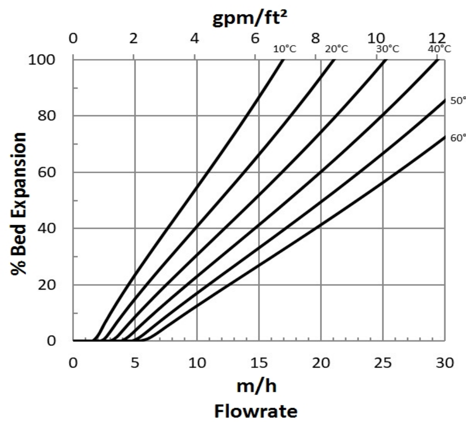
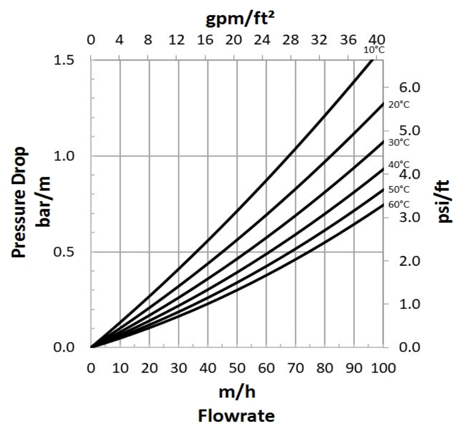


Figure 2: Pressure Drop
Temperature = 10 – 60°C (50 – 140°F)



Product Stewardship

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

Customer Notice

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

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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