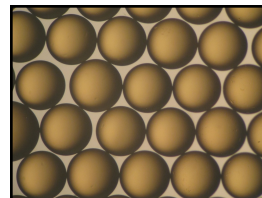


## AmberLite™ HPR1200 H Ion Exchange Resin

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### Historical Reference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.

## Typical Properties

|                            |                                          |
|----------------------------|------------------------------------------|
| <b>Physical Properties</b> |                                          |
| Copolymer                  | Styrene-divinylbenzene                   |
| Matrix                     | Gel                                      |
| Type                       | Strong acid cation                       |
| Functional Group           | Sulfonic acid                            |
| Physical Form              | Dark brown, translucent, spherical beads |
| <b>Chemical Properties</b> |                                          |
| Ionic Form as Shipped      | H <sup>+</sup>                           |
| Total Exchange Capacity    | ≥ 1.8 eq/L (H <sup>+</sup> form)         |
| Water Retention Capacity   | 50.0 – 56.0% (H <sup>+</sup> form)       |
| <b>Particle Size</b> §     |                                          |
| Particle Diameter          | 600 ± 50 µm                              |
| Uniformity Coefficient     | ≤ 1.10                                   |
| < 300 µm                   | ≤ 0.1%                                   |
| > 850 µm                   | ≤ 3.0%                                   |
| <b>Stability</b>           |                                          |
| Whole Uncracked Beads      | ≥ 95%                                    |
| Swelling                   | Na <sup>+</sup> → H <sup>+</sup> : 8%    |
| <b>Density</b>             |                                          |
| 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 <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 [mixed beds](#) (Form No. 45-D01127-en) or [separate beds](#) (Form No. 45-D01131-en) in water treatment, please refer to our Tech Facts.

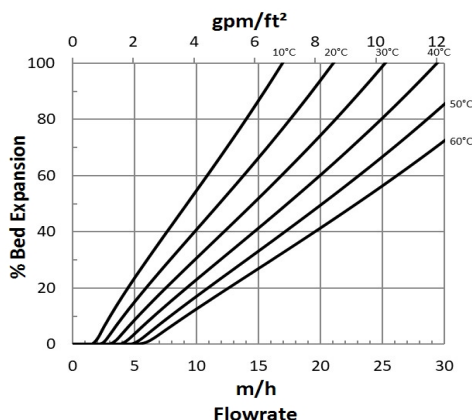
## Hydraulic Characteristics

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.

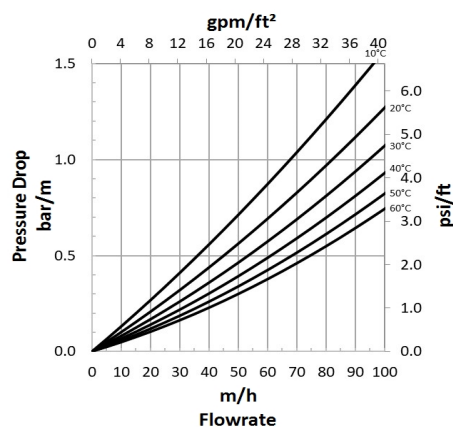
**Figure 1: Backwash Expansion**

Temperature = 10 – 60°C (50 – 140°F)



**Figure 2: Pressure Drop**

Temperature = 10 – 60°C (50 – 140°F)



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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.

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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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