



## Product Data Sheet

### **AMBERLITE™ HPR9200 CI Ion Exchange Resin**

Uniform Particle Size, Macroporous, Strong Base Anion Exchange Resin for Industrial Demineralization Applications

#### **Description**

AMBERLITE™ HPR9200 CI Ion Exchange Resin is a robust, high-quality resin for use in industrial demineralization applications when a combination of exceptional physical stability, simple and reliable operation, and long resin life is required.



AMBERLITE™ HPR9200 CI has exceptional physical stability, excellent resistance to osmotic shock, and very good organic fouling resistance. It is well-suited for use in demineralization of high organic waters.

AMBERLITE™ HPR9200 CI is compatible with all system technologies; it has the flexibility to be used in lead single or in mixed bed polishers. In mixed bed applications, the light color of this anion resin is designed to allow easy visual distinction from the dark-colored cation resin following backwash separation.

#### **Resin Pairings**

Recommended pairing:

- AMBERLITE™ HPR1300 H Ion Exchange Resin (gel)
- AMBERLITE™ HPR2800 H Ion Exchange Resin (macroporous)

#### **Applications**

- Demineralization
  - Ideally when treating water with:
    - High organic fouling potential
    - High percentage of silica
  - When the treatment goal is:
    - Removal of strong and weak acids
    - Lowest silica leakage
- Mixed bed polishing

#### **System Designs**

Compatible with all system technologies:

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

#### **Historical Reference**

AMBERLITE™ HPR9200 CI Ion Exchange Resin has previously been sold as DOWEX MARATHON™ MSA Ion Exchange Resin.

## Typical Properties

<b>Physical Properties</b>	
Copolymer	Styrene-divinylbenzene
Matrix	Macroporous
Type	Strong base anion, Type I
Functional Group	Trimethylammonium
Physical Form	White, opaque, spherical beads
<b>Chemical Properties</b>	
Ionic Form as Shipped	Cl <sup>-</sup>
Total Exchange Capacity	≥ 1.1 eq/L (Cl <sup>-</sup> form)
Water Retention Capacity	56.0 – 66.0% (Cl <sup>-</sup> form)
<b>Particle Size</b> §	
Particle Diameter	640 ± 50 µm
Uniformity Coefficient	≤ 1.1
< 300 µm	≤ 0.3%
> 850 µm	≤ 1.0%
<b>Stability</b>	
Whole Uncracked Beads	≥ 95%
Swelling	Cl <sup>-</sup> → OH <sup>-</sup> : 15%
<b>Density</b>	
Particle Density	1.06 g/mL
Shipping Weight	675 g/L

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

## Suggested Operating Conditions

<b>Temperature Range</b>	
OH <sup>-</sup> form ‡	5 – 60°C (41 – 140°F)
Cl <sup>-</sup> form	5 – 100°C (41 – 212°F)
<b>pH Range</b>	
Service Cycle	1 – 14
Stable	0 – 14

‡ Operating at elevated temperatures, for example above 60 – 70°C (140 – 158°F), may impact resin life. Contact our technical representative for details.

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.

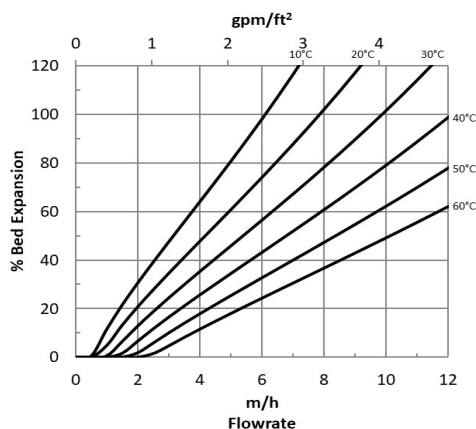
## Hydraulic Characteristics

Estimated bed expansion of AMBERLITE™ HPR9200 Cl Ion Exchange Resin as a function of backwash flowrate and temperature is shown in Figure 1.

Estimated pressure drop for AMBERLITE™ HPR9200 Cl 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.

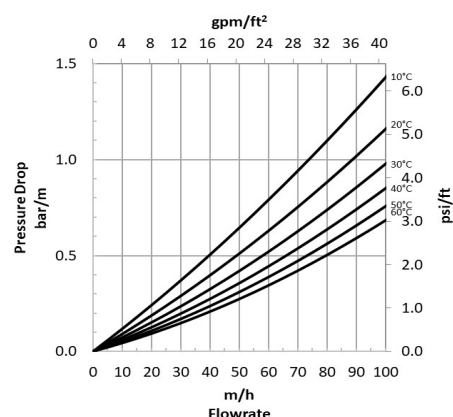
**Figure 1: Backwash Expansion**

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.

**Have a question? Contact us at:**

[www.dupont.com/water/contact-us](http://www.dupont.com/water/contact-us)

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