



# DuPont™ AmberLite™ HPR2800 H Ion Exchange Resin

Uniform Particle Size, Macroporous, Strong Acid Cation Exchange Resin for Condensate Polishing for the Power Industry and Industrial Demineralization Applications

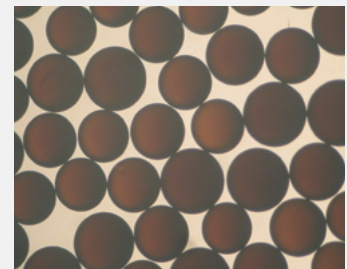
## Description

DuPont™ AmberLite™ HPR2800 H Ion Exchange Resin is a high-quality resin for use in condensate polishing beds at fossil-fired electric generating stations, process condensate, and industrial demineralization applications when a combination of exceptional physical stability, simple and reliable operation, and long resin life is required.

AmberLite™ HPR2800 H is compatible with all system technologies and bed configurations. 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. For maximum resistance to surface fouling, this macroporous cation resin should be paired with a macroporous anion resin such as AmberLite™ HPR900 OH Ion Exchange Resin or AmberLite™ HPR9000 OH Ion Exchange Resin.

AmberLite™ HPR8300 H Ion Exchange Resin is the weak acid cation resin best paired with AmberLite™ HPR2800 H for optimal performance in new and retrofitted layered beds.

AmberLite™ HPR2800 H is compliant with the China National Standard specifications for fossil power condensate polishing applications, including the China Strong Osmotic Ball Mill test.



## Resin Pairings

Recommended pairing in condensate polishing:

- AmberLite™ HPR900 OH Ion Exchange Resin (macroporous)

Recommended pairing in industrial demineralization applications:

- AmberLite™ HPR8300 H Ion Exchange Resin (macroporous)
  - for layered bed
- AmberLite™ HPR9000 OH Ion Exchange Resin (macroporous)
  - for mixed bed
- AmberLite™ HPR900 OH Ion Exchange Resin (macroporous)
  - for mixed bed

Additional options in condensate polishing:

- AmberLite™ HPR9000 OH Ion Exchange Resin (macroporous)
- AmberLite™ HPR9000 SO4 Ion Exchange Resin (macroporous)
- AmberLite™ HPR900 SO4 Ion Exchange Resin (macroporous)

Additional pairing in industrial demineralization applications:

- AmberLite™ HPR9200 Cl Ion Exchange Resin (macroporous)
  - for mixed bed

## Applications

- Systems requiring exceptionally high osmotic stability
- Condensate polishing
- Demineralization, ideally when treating water with:
  - High oxidant level
  - High temperature on the cation resin
- Mixed bed polishing

## Typical Properties

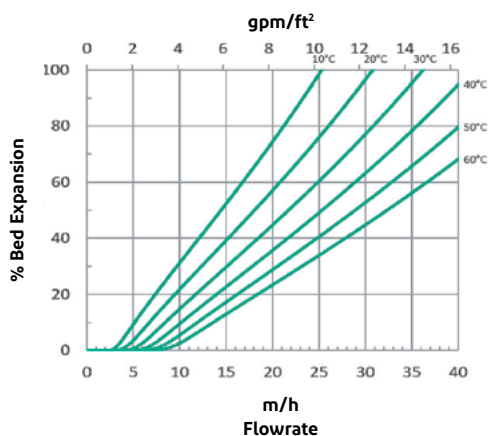
Physical Properties	
Copolymer	Styrene-divinylbenzene
Matrix	Macroporous
Type	Strong acid cation
Functional Group	Sulfonic acid
Physical Form	Dark brown, opaque, spherical beads
Chemical Properties	
Ionic Form as Shipped	H <sup>+</sup>
Total Exchange Capacity	≥ 1.70 eq/L (H <sup>+</sup> form)
Water Retention Capacity	52.0 – 58.0% (H <sup>+</sup> form)
Ionic Conversion	
H <sup>+</sup>	≥ 99%

## Suggested Operating Conditions

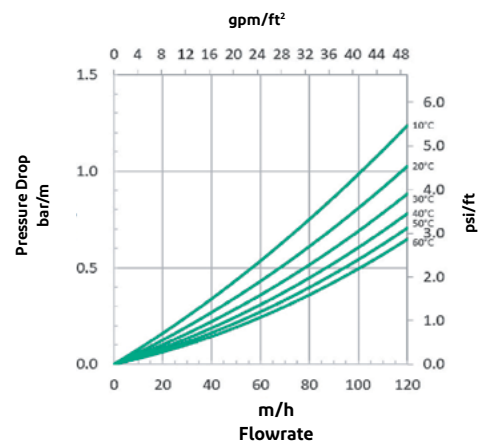
Temperature Range (H <sup>+</sup> form)	5 – 150°C (41 – 302°F)
pH Range (Stable)	0 – 14

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.

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



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



## System Designs

- Compatible with all system technologies and bed configurations
- Co-current
  - Counter-current / Hold-down
  - Layered beds
  - Packed beds
  - Mixed beds

## Historical Reference

AmberLite™ HPR2800 H Ion Exchange Resin has previously been sold as AMBERJET™ 2800 H Ion Exchange Resin.

Particle Size <sup>5</sup>	
Particle Diameter	800 ± 100 μm
Uniformity Coefficient	≤ 1.20
< 300 μm	≤ 0.2%
< 500 μm	≤ 1.0%
> 1180 μm	≤ 1.0%

Stability	
Whole Uncracked Beads	≥ 95%
Strong Osmotic Ball Mill Test	≥ 90%
Swelling	Na <sup>+</sup> → H <sup>+</sup> ≤ 7%

Density	
Particle Density	1.19 g/mL
Shipping Weight	755 g/L

<sup>5</sup> For additional particle size information, please refer to the [Particle Size Distribution Cross Reference Chart](#) (Form No. 45-D00954-en).

## Hydraulic Characteristics

Estimated bed expansion of DuPont™ AmberLite™ HPR2800 H Ion Exchange Resin as a function of backwash flowrate and temperature is shown in Figure 1.

Estimated pressure drop for AmberLite™ HPR2800 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.

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

All information set forth herein is for informational purposes only. This information is general information and may differ from that based on actual conditions. 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 DuPont is represented. The claims made may not have been approved for use in all countries. 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. DUPONT ASSUMES NO OBLIGATION OR LIABILITY FOR THE INFORMATION IN THIS DOCUMENT. References to "DuPont" or the "Company" mean the DuPont 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. No freedom from infringement of any patent or trademark owned by DuPont or others is to be inferred.

DuPont™, the DuPont Oval Logo, and all trademarks and service marks denoted with ™, SM or © are owned by affiliates of DuPont de Nemours Inc. unless otherwise noted. © 2024 DuPont. All rights reserved.

Form No. 45-D01197-en, Rev. 3  
February 2024