



# DuPont™ AmberLite™ HPR252 H Ion Exchange Resin

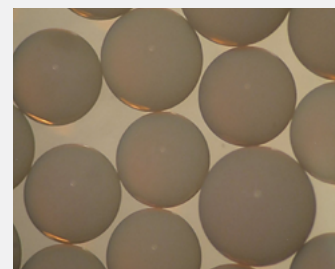
Uniform Particle Size, Strong Acid Cation Exchange Resin for Condensate Polishing for the Power Industry and Industrial Demineralization Applications

## Description

DuPont™ AmberLite™ HPR252 H Ion Exchange Resin is specifically designed for use in condensate polishing beds at fossil-fired electric generating stations and industrial demineralization applications when a balance of operating performance, simple operation, long resin life, and costeffective operation is required.

The high level of DVB crosslinker, combined with a macroporous structure, offers exceptional physical and oxidative stability, making it especially suitable for high-temperature operation. AmberLite™ HPR252 H can operate reliably under the high flowrate and pressure drop conditions that are typically used in condensate polishers.

This resin is designed to be used in combination with AmberLite™ HPR900 OH Ion Exchange Resin and AmberLite™ 600BB Inert Resin in TRIOBED™ Condensate Polishers, providing an optimized balance of stability, operating capacity, low pressure drop, and regeneration efficiency. The balance of bead size distribution and bead density allows excellent separability, making it an optimal choice for layered beds in industrial demineralization.



## Resin Pairings

Recommended pairing:

- AmberLite™ HPR900 OH Ion Exchange Resin (macroporous)

Additional options:

- AmberLite™ HPR900 SO4 Ion Exchange Resin (macroporous)

## Applications

- Mixed bed condensate polishing in fossil power plants
- Single bed industrial demineralization requiring high water purity
- Mixed bed polishing in industrial demineralization
- Systems requiring exceptionally high osmotic stability

## Historical Reference

AmberLite™ HPR252 H Ion Exchange Resin has previously been sold as AmberSep™ 252 H Ion Exchange Resin.

## Typical Properties

| Physical Properties      |                                     |
|--------------------------|-------------------------------------|
| Copolymer                | Styrene-divinylbenzene              |
| Matrix                   | Macroporous                         |
| Type                     | Strong acid cation                  |
| Functional Group         | Sulfonic acid                       |
| Physical Form            | Light gray, opaque, spherical beads |
| Chemical Properties      |                                     |
| Ionic Form as Shipped    | H <sup>+</sup>                      |
| Total Exchange Capacity  | ≥ 1.65 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

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.

| Particle Size <sup>5</sup> |             |
|----------------------------|-------------|
| Particle Diameter          | 950 ± 50 µm |
| Uniformity Coefficient     | ≤ 1.20      |
| < 600 µm                   | ≤ 1.0%      |
| > 1180 µm                  | ≤ 5.0%      |

| Stability             |                                       |
|-----------------------|---------------------------------------|
| Whole Uncracked Beads | ≥ 95%                                 |
| Swelling              | Na <sup>+</sup> → H <sup>+</sup> ≤ 7% |

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

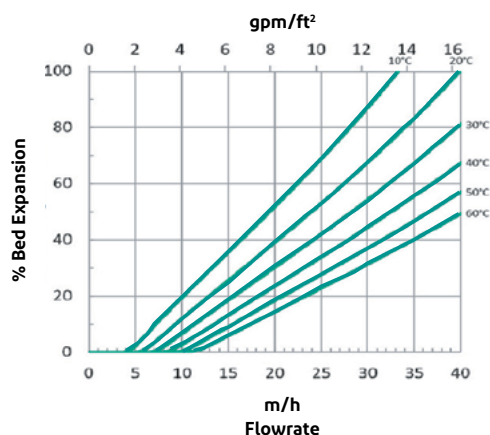
<sup>5</sup> For additional particle size information, please refer to the [Particle Size Distribution Cross Reference Chart](#) (Form No. 45-D00954-en).

## Hydraulic Characteristics

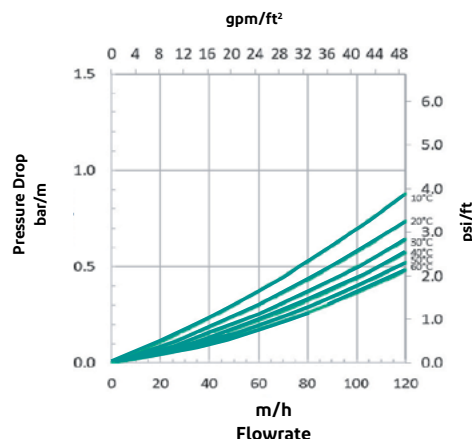
Estimated bed expansion of DuPont™ AmberLite™ HPR252 H Ion Exchange Resin as a function of backwash flowrate and temperature is shown in Figure 1.

Estimated pressure drop for AmberLite™ HPR252 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

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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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