



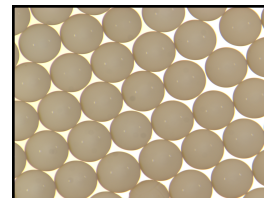
Product Data Sheet

DuPont™ AmberLite™ HPR9600 Ion Exchange Resin

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

Description

DuPont™ AmberLite™ HPR9600 Ion Exchange Resin is a 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 water usage.



Weak base anion resins are well-suited for use with strong base anion resins to improve overall efficiency and throughput of a demineralization system. It effectively removes mineral acids and organics, reducing the ionic load on the strong base anion resin and also protecting it from organic fouling. The weak base anion resin increases a system's overall capacity to remove organics.

AmberLite™ HPR9600 combines excellent physical and thermal stability with high kinetics, yielding good operating capacity even in low-temperature operations. The macroporous structure allows for easy release of natural organic molecules providing excellent organic fouling resistance.

AmberLite™ HPR9600 is designed for use in single bed or layered bed systems when paired with AmberLite™ HPR4200 Cl or OH Ion Exchange Resin.

Applications

- Demineralization, ideally when treating water with:
 - High organic fouling potential
 - High percentage of mineral acidity (FMA)
- Partial demineralization when weak acid removal is not required

System Designs

Compatible with all system technologies and bed configurations:

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

Historical Reference

AmberLite™ HPR9600 Ion Exchange Resin has previously been sold as DOWEX MARATHON™ 9600 Ion Exchange Resin.

Typical Properties

| | |
|----------------------------|--------------------------------|
| Physical Properties | |
| Copolymer | Styrene-divinylbenzene |
| Matrix | Macroporous |
| Type | Weak base anion |
| Functional Group | Tertiary amine |
| Physical Form | Cream, opaque, spherical beads |
| Chemical Properties | |
| Ionic Form as Shipped | Free base (FB) |
| Total Exchange Capacity | ≥ 1.3 eq/L (FB form) |
| Water Retention Capacity | 59.0 – 65.0% (FB form) |
| Particle Size § | |
| Particle Diameter | 550 ± 50 µm |
| Uniformity Coefficient | ≤ 1.1 |
| < 300 µm | ≤ 0.2% |
| Stability | |
| Whole Uncracked Beads | ≥ 95% |
| Swelling | FB → HCl : 15% |
| Density | |
| Particle Density | 1.05 g/mL |
| Shipping Weight | 670 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 (FB form) | 5 – 60°C (41 – 140°F) |
| pH Range | |
| Service Cycle | 0 – 6 |
| Stable | 0 – 14 |

For additional information regarding recommended minimum bed depth, operating conditions, and regeneration conditions for [separate beds](#) (Form No. 45-D01131-en) in water treatment, please refer to our Tech Fact.

Hydraulic Characteristics

Estimated bed expansion of DuPont™ AmberLite™ HPR9600 Ion Exchange Resin as a function of backwash flowrate and temperature is shown in Figure 1.

Estimated pressure drop for AmberLite™ HPR9600 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)

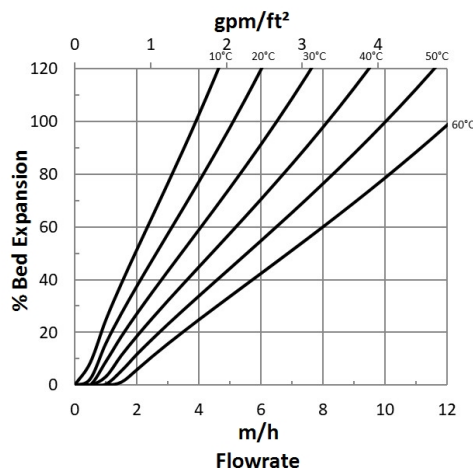
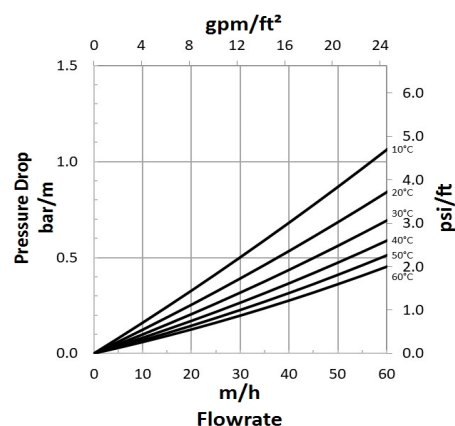


Figure 2: Pressure Drop

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.

Have a question? Contact us at:

www.dupont.com/water/contact-us

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