

DuPont™ AmberSep™ IRA743 Chelating Resin

Industrial-grade Chelating Resin for Selective Boron Removal

Key Features

- High boron selectivity
- Very low boron leakage
- Excellent operating capacity and low regenerant consumption
- Suitable for packed beds
- High physical and chemical stability

Key Applications

- Irrigation water
- Ultrapure water
- Wastewater for fossil power plants
- Purification of magnesium brine
- Purification of lithium brines
- Produced water

Typical Properties

Physical Properties	
Copolymer	Styrene-divinylbenzene
Matrix	Macroporous
Type	Chelant
Physical Form	Off-white, opaque, spherical beads

Chemical Properties	
Ionic Form as Shipped	Free base (FB)
Total Exchange Capacity	≥ 0.6 eq/L
Water Retention Capacity	48–54%

Density	
Shipping Weight	700 g/L
Particle Density	1.3 g/mL

Particle Size [§]	
Particle Diameter	500–700µm
Uniformity Coefficient	≤ 1.6
<300µm	≤ 1%
>1180µm	≤ 5%

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

Suggested Operating Conditions

Physical Properties	
Maximum Recommended Operating Temperature	75°C (167°F)
Service Flowrate	4–30 BV*/h
Regeneration	Several regeneration procedures are available, depending on the application

* 1 BV (Bed Volume) = 1 m³ solution per m³ resin or 7.5 gal per ft³ resin

Hydraulic Characteristics

Bed expansion of DuPont™ AmberSep™ IRA743 resin as a function of backwash flow rate and water temperature is shown in Figure 1.

Pressure drop data for DuPont™ AmberSep™ IRA743 resin water as a function of service flow rate and water temperature is shown in Figure 2. Pressure drop data are valid for clean, classified beds which have not been contaminated with suspended solids during the service run; if the bed accumulates solids, the pressure drop will increase.

Figure 1: Bed Expansion
Temperature = 10 – 60°C (50 – 140°F)

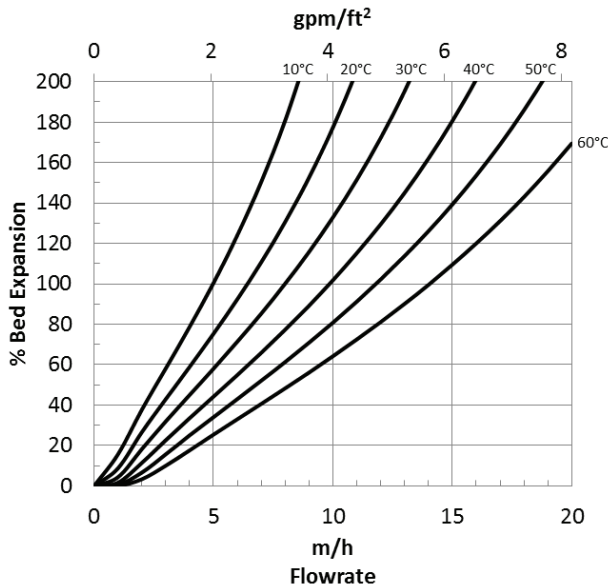
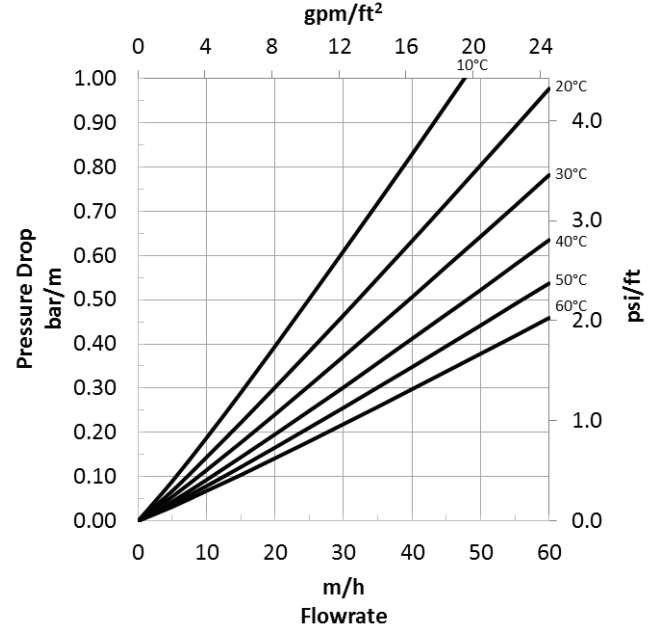


Figure 2: Pressure Drop
Temperature = 10 – 60°C (50 – 140°F)



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.

Regulatory Note

These products may be subject to irrigation water / drinking water application restrictions in some countries; please check the application status before use and sale.

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:
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