Product Data Sheet

AmberLite™ PWA15 Ion Exchange Resin

Drinking Water-grade, Uniform Particle Size Resin for Nitrate Removal

Description

AmberLite™ PWA15 Ion Exchange Resin is a uniform particle size anion exchange resin which can be used for the removal of nitrate from drinking water. It has outstanding physical stability and excellent rinse characteristics.

AmberLite™ PWA15 is designed for regenerable nitrate removal for municipal water treatment systems. The uniform particle size makes it ideal for packed bed systems.

Applications

Primary application:

- Nitrate removal when the nitrate concentration is greater than sulfate concentrate

Also can be used for:

- Chromate removal in a regenerable system

Typical Properties

Physical Properties	
Copolymer	Styrene-divinylbenzene
Matrix	Gel
Type	Strong base anion
Functional Group	Trimethylammonium
Physical Form	Amber, translucent, spherical beads
Chemical Properties	
Ionic Form as Shipped	Free base (FB)
Total Exchange Capacity	≥ 0.7 eq/L
Water Retention Capacity	48 – 54%
Particle Size [§]	
Particle Diameter	580 ± 50 µm
Uniformity Coefficient	≤ 1.1
< 300 µm	≤ 0.3%
> 850 µm	≤ 5.0%
Density	
Shipping Weight	674 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

Maximum Operating Temperature	40°C (104°F)
pH Range	
Service Cycle	5 – 8
Stable	0 – 14

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Hydraulic Characteristics

Estimated bed expansion of AmberLite™ PWA15 Ion Exchange Resin as a function of backwash flowrate and temperature is shown in Figure 1.

Estimated pressure drop for AmberLite™ PWA15 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)

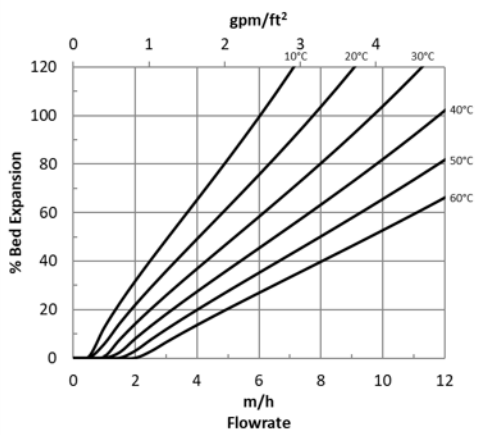
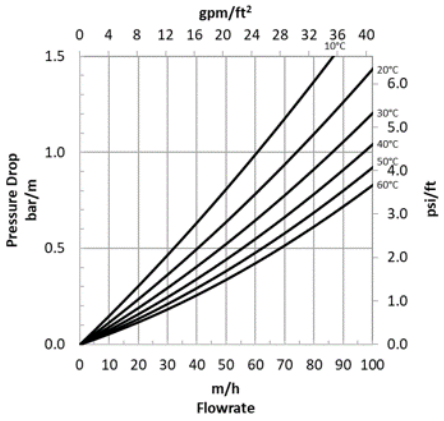


Figure 2: Pressure Drop

Temperature = 10 – 60°C (50 – 140°F)



Conditioning and Limits of Use

AmberLite™ PWA15 Ion Exchange Resin is suitable for use in potable water applications[1] after an initial commissioning rinse of 10 bed volumes of potable water at ambient temperature.

The operating capacity of AmberLite™ PWA15 resin depends on the operating conditions and the feedwater conditions.

1. Please confirm the regulatory approval in your specific country of use.

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.

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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.

Regulatory Note

This product may be subject to drinking water application restrictions in some countries; please check the application status before use and sale.

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