



DOW AMBERLITE™ PWA15 Resin

Drinking Water Grade

Nitrate Removal

Description

DOW AMBERLITE™ PWA15 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.

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

Typical Properties

Physical form	Light amber beads
Matrix	Cross linked copolymer
Total exchange capacity	≥ 1.30 eq/L
Water Retention Capacity	50–60%
Shipping weight	674 kg/m ³ (42 lbs/ft ³)
Particle size	
Uniformity coefficient	< 1.1
Fines content	< 0.300 mm : 0.5% max

Suggested Operating Conditions

Please contact your Dow representative for system design and application testing details.

Maximum operating temperature	60°C (140°F)
Minimum bed depth	610 mm (24 inches)
Typical service flow rate	5–40 BV/h* (0.6–5 gpm/ft ³)
Regenerant	NaCl
Concentration	6–12%
Minimum level	80 g/L (5 lb/ft ³)
Minimum contact time	20 minutes

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

Commissioning and Limits of Use

DOW AMBERLITE™ PWA15 Resin is suitable for use in potable water applications after an initial commissioning rinse of 10 BV of water at ambient temperature.

The operating capacity of DOW AMBERLITE PWA15 Resin depends on the operating conditions and the feed water conditions.

Regulatory

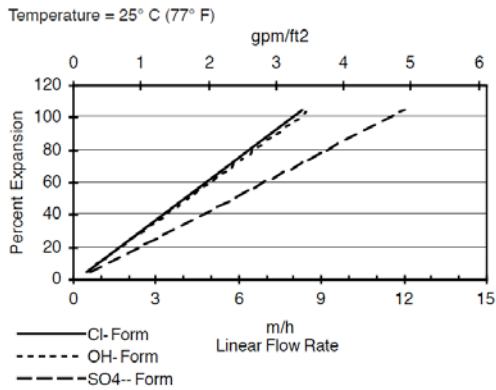
DOW AMBERLITE™ PWA15 Resin is certified to ANSI / NSF Standard 61 for drinking water components. Please contact your Dow representative for additional certification information.

Resin products are manufactured in ISO 9001 certified facilities.

Hydraulic Characteristics

Figure 1 and Figure 2 show the pressure drop data for DOW AMBERLITE™ PWA15 Resin as a function of flow rate and water temperature. Pressure drop data are valid at the start of the service run with clean water and a correctly classified bed. Figure 3 and Figure 4 show the bed expansion of DOW AMBERLITE PWA15 Resin as a function of backwash flow rate and water temperature.

Figure 1. Pressure Drop Data

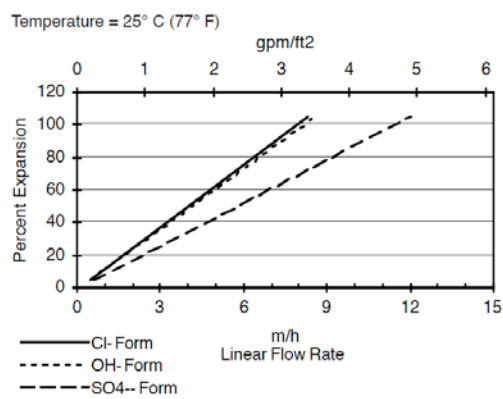


For other temperatures use:

$$F_T = F_{77°F} [1 + 0.008 (T_F - 77)], \text{ where } F \equiv \text{gpm/ft}^2$$

$$F_T = F_{25°C} [1 + 0.008 (1.8T_C - 45)], \text{ where } F \equiv \text{m/h}$$

Figure 2. Backwash Expansion Data



For other temperatures use:

$$F_T = F_{77°F} [1 + 0.008 (T_F - 77)], \text{ where } F \equiv \text{gpm/ft}^2$$

$$F_T = F_{25°C} [1 + 0.008 (1.8T_C - 45)], \text{ where } F \equiv \text{m/h}$$

Product Stewardship

Dow 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 Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

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.

DOW™ Ion Exchange Resins

For more information about DOW™ resins, call the Dow Water & Process Solutions business:

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