

AMBERLITE™ PWA5 Resin

Drinking Water Grade

Nitrate Selective

AMBERLITE PWA5 resin is a strongly basic anion exchange resin, developed for selective nitrate removal from drinking waters. AMBERLITE PWA5 resin removes nitrate preferentially to sulfate, and therefore can yield operating capacity higher than conventional resins.

These characteristics make AMBERLITE PWA5 resin the perfect choice for a simple, regenerable nitrate removal process for municipal water treatment.

AMBERLITE PWA5 resin is compatible with the Advanced Amberpack™ Municipal system.

PROPERTIES

Matrix_____	Cross linked copolymer
Physical form_____	Cream beads
Total exchange capacity _____	≥ 1.0 eq/L
Moisture holding capacity_____	52 – 58%
Shipping weight _____	690 kg/m ³ (43 lb/ft ³)
Particle size	
Screen grading _____	0.3 – 1.2 mm (16 – 50 mesh US Std Screens)
Fines content_____	<0.300 mm: 0.3% max

SUGGESTED OPERATING CONDITIONS

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

Maximum operating temperature _____	75 °C	(170 °F)
Minimum bed depth _____	610 mm	(24 inches)
Typical service flow rate _____	5 – 40 BV/h*	(0.6 – 5 gpm/ft ³)
Regenerant (100% basis) _____	NaCl	
Concentration_____	6 – 12%	
Minimum level _____	80 g/L	(5 lbs/ft ³)
Minimum contact time _____	20 minutes	

* 1 BV (Bed Volume) = 1 m³ solution per m³ resin

COMMISSIONING AND LIMITS OF USE

AMBERLITE PWA5 resin is suitable for use in potable water applications after performing a full regeneration cycle at a dosage of 120 g of NaCl per liter of resin followed by an adequate rinse to remove excess of brine.

The operating capacity of AMBERLITE PWA5 resin depends on the operating conditions and the feed water conditions.

REGULATORY

AMBERLITE PWA5 resin is certified to ANSI/NSF Standard 61 for drinking water components. AMBERLITE PWA5 resin is approved for use in public water supplies in the UK. Please contact your Rohm and Haas 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 AMBERLITE PWA5 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 AMBERLITE PWA5 resin as a function of backwash flow rate and water temperature.

Figure 1 Pressure Drop (metric)

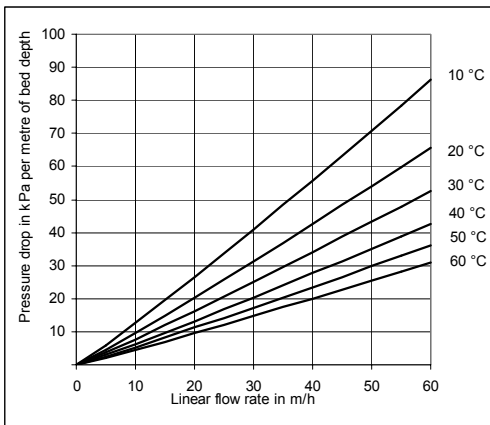


Figure 2 Pressure Drop (US units)

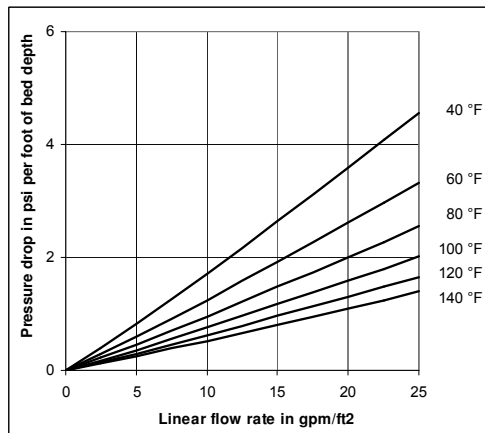


Figure 3 Bed Expansion (metric)

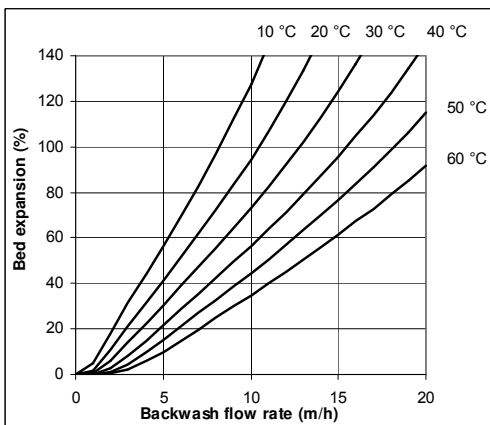
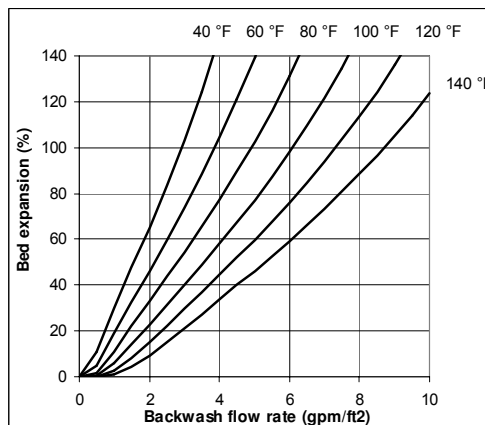


Figure 4 Bed Expansion (US units)



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Ion exchange resins and polymeric adsorbents, as produced, contain by-products resulting from the manufacturing process. The user must determine the extent to which organic by-products must be removed for any particular use and establish techniques to assure that the appropriate level of purity is achieved for that use. The user must ensure compliance with all prudent safety standards and regulatory requirements governing the application. Except where specifically otherwise stated, Rohm and Haas Company does not recommend its ion exchange resins or polymeric adsorbents, as supplied, as being suitable or appropriately pure for any particular use. Consult your Rohm and Haas technical representative for further information. Acidic and basic regenerant solutions are corrosive and should be handled in a manner that will prevent eye and skin contact. Nitric acid and other strong oxidising agents can cause explosive type reactions when mixed with Ion Exchange resins. Proper design of process equipment to prevent rapid buildup of pressure is necessary if use of an oxidising agent such as nitric acid is contemplated. Before using strong oxidising agents in contact with Ion Exchange Resins, consult sources knowledgeable in the handling of these materials.

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