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AMBERLITE™ PWA5 Resin

Drinking Water Grade

Introduction

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

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	

Conditioning 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 Dow Water & Process Solutions for additional certification information.

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)

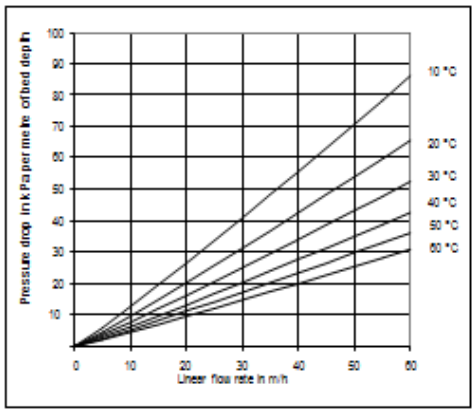


Figure 2 Pressure Drop (US units)

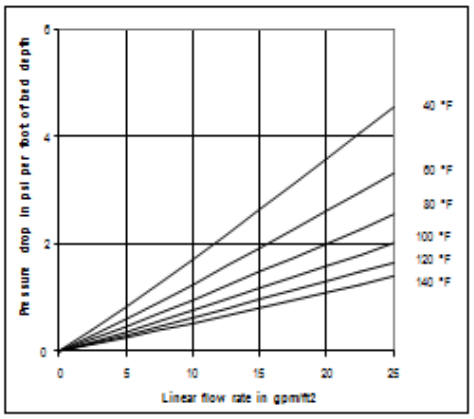


Figure 3 Bed Expansion (metric)

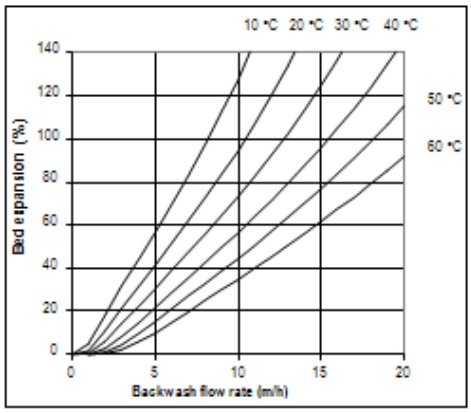
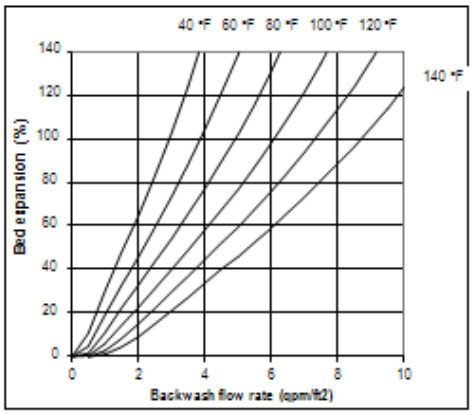


Figure 4 Bed Expansion (US units)



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

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