

AMBERLITE™ PWA8 Resin

Drinking Water Grade

Uranium Removal

AMBERLITE PWA8 resin is an anion exchange resin which can be used for the removal of uranium from drinking water. In addition to high exchange capacity, this resin has excellent physical stability and resistance to organic fouling.

After cation exchange, AMBERLITE PWA8 resin can also remove anionic contaminants from drinking water.

PROPERTIES

Matrix_____	Cross linked copolymer
Physical form_____	Clear white beads
Total exchange capacity _____	≥ 1.6 eq/L
Moisture holding capacity _____	56 – 64%
Shipping weight _____	700 kg/m ³ (45 lb/ft ³)
Particle size	
Screen grading _____	0.3 – 1.2 mm (16 – 50 mesh US Std Screens)
Fines content _____	< 0.300 mm: 2% maximum

SUGGESTED OPERATING CONDITIONS

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

Maximum operating temperature _____	35°C	(140°F)	
Minimum bed depth _____	600 mm	(24 inches)	
Typical service flow rate _____	8 to 40 BV/h*	(1 – 5 gpm/ft ³)	
Regenerant (for demineralization) _____	NaOH	NH₄OH	Na₂CO₃
Concentration _____	2 – 4%	2 – 4%	2 – 4%
Minimum level _____	130% of ionic load		
Minimum contact time _____	30 minutes		

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

COMMISSIONING AND LIMITS OF USE

AMBERLITE PWA8 resin is suitable for use in potable water applications after an initial commissioning rinse of 20 BV (140 gal/ft³) of water at 25°C (75°F)

The operating capacity of AMBERLITE PWA8 resin depends on the operating conditions and the feed water conditions.

REGULATORY

AMBERLITE PWA8 resin is approved for use in Germany for potable water applications. 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 PWA8 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 PWA8 resin as a function of backwash flow rate and water temperature.

Figure 1 Pressure Drop (metric)

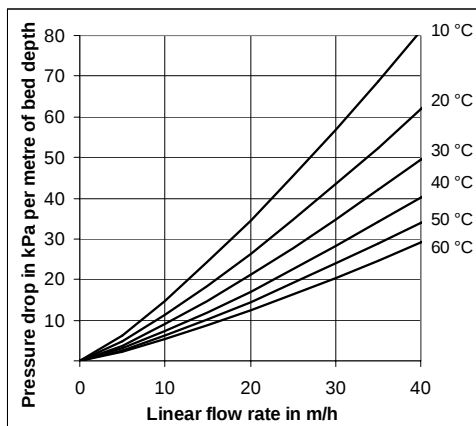


Figure 2 Pressure Drop (US units)

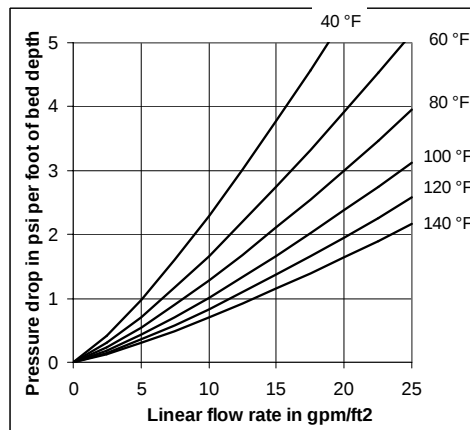


Figure 3 Bed Expansion (metric)

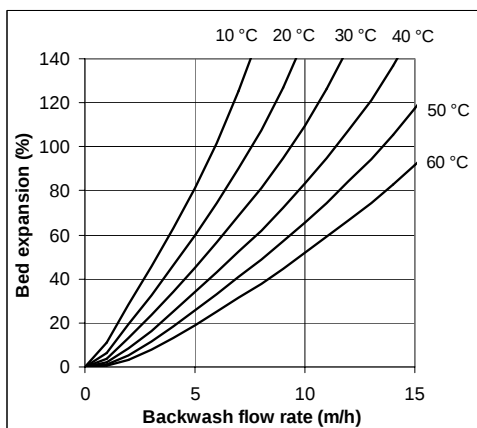
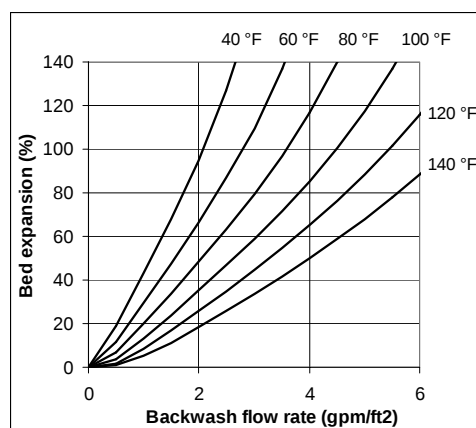


Figure 4 Bed Expansion (US units)



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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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