



AMBERLITE™ XAD7HP

Macroreticular Polymeric Adsorbent

Description

AMBERLITE™ XAD7HP is a polymeric adsorbent, supplied as white insoluble beads. It is a non ionic aliphatic acrylic polymer which derives its adsorptive properties from its patented macroreticular structure (containing both a continuous polymer phase and a continuous pore phase), high surface area and the aliphatic nature of its surface (Figure 2). This macroreticular structure also gives AMBERLITE XAD7HP Polymeric Adsorbent excellent physical and thermal stability. Due to its aliphatic nature, AMBERLITE XAD7HP Polymeric Adsorbent can adsorb non polar compounds from aqueous systems, and can also adsorb polar compounds from non-polar solvents.

Typical Physical and Chemical Properties

(These properties are typical but are not to be construed as sales specifications).

Physical form	White translucent beads
Matrix	Macroreticular aliphatic crosslinked polymer
Moisture holding capacity	61–69%
Shipping weight	655 g/L
Specific gravity	1.06–1.08
Particle size	
Harmonic mean size	0.56–0.71 mm
Uniformity coefficient	≤ 2.0
Fines content	< 0.300 mm : 7.0% max
Coarse beads	> 1.18 mm : 8.0% max
Maximum reversible swelling	See Table 1
Surface area ^[1]	≥ 380 m ² /g
Porosity ^[1]	≥ 0.50 ml/ml

^[1] Values based on statistical quality control (SQC)

Suggested Operating Conditions

pH range	0–14
Maximum temperature limit	80–100°C
Minimum bed depth	75 cm
Flow rate	
Loading	2–16 BV/h
Displacement	1–4 BV/h
Regeneration	1–4 BV/h
Rinse	2–16 BV/h

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

Hydraulic Characteristics

Figure 4 shows the bed expansion of AMBERLITE XAD7HP as a function of backwash flow rate and water temperature. Figure 5 shows the pressure drop for AMBERLITE XAD7HP as a function of service flow rate and water temperature. Pressure drop data are valid at the start of the service run with a clear water and a correctly classified bed.

Figure 4. Bed Expansion

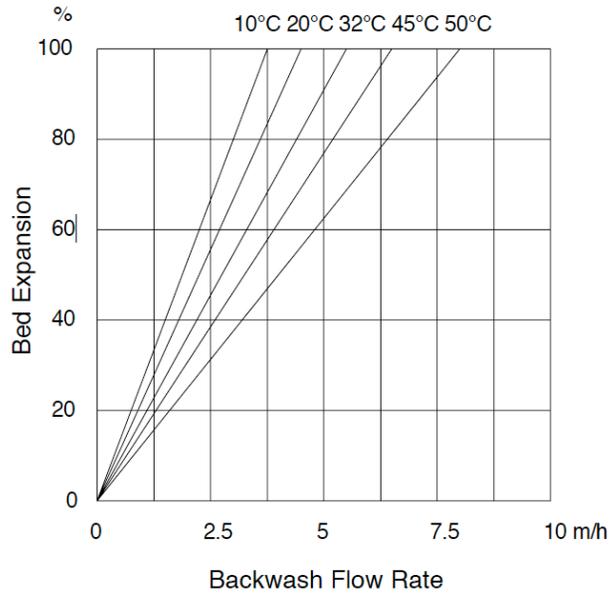
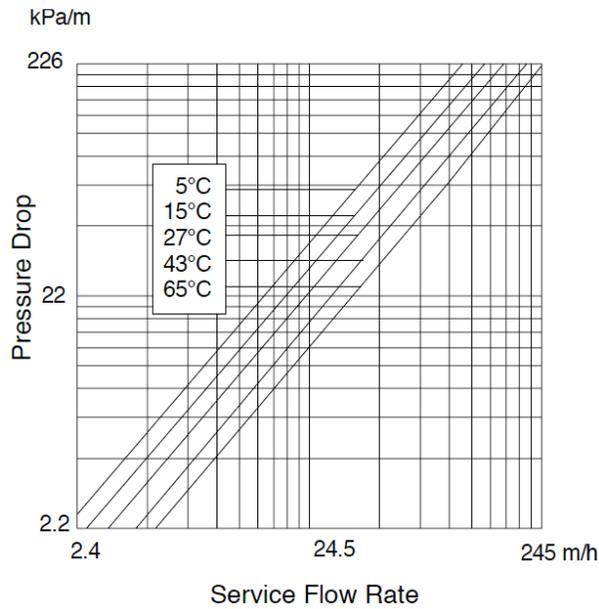


Figure 5. Pressure Drop



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Europe: +800-3-694-6367
Italy: +800-783-825
South Africa: +0800 99 5078
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<http://www.dowwaterandprocess.com>

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