



AMBERLITE™ IR120 Na

Industrial Grade Strong Acid Cation Exchanger

Introduction

AMBERLITE IR120 Na resin is a gel type strongly acidic cation exchange resin of the sulfonated polystyrene type. It is used for water softening (in Na⁺ form) as well as for water demineralisation (in H⁺ form) in co-flow regenerated units. AMBERLITE IR120 Na resin is an excellent general purpose cation exchange resin that can be used for a wide variety of industrial water treatment applications including both softening and demineralisation.

Properties

Physical Form	Amber spherical beads
Matrix	Styrene divinylbenzene copolymer
Functional group	Sulfonate
Ionic form as shipped	Na ⁺
Total exchange capacity	≥ 2.00 eq/L (Na ⁺ form)
Moisture holding capacity	45 to 50 % (Na ⁺ form)
Shipping weight	840 g/L
Particle Size	
Uniformity coefficient	≤ 1.9
Harmonic mean size	0.600 to 0.800 mm < 0.300 mm 2 % max
Maximum reversible swelling	Na ⁺ → H ⁺ ≤ 11 %

Suggested Operating Conditions

Water Treatment			
Maximum operating temperature	135 °C		
Minimum bed depth	700 mm		
Service flow rate	5 to 40 BV*/h		
Regeneration			
Regenerant	HCl	H ₂ SO ₄	NaCl
Level (g/L)	50 to 150	60 to 240	80 to 250
Concentration (%)	5 to 8	0.7 to 6	10
Minimum contact time	30 minutes		
Slow rinse	2 BV at regeneration flow rate		
Fast rinse	2 to 4 BV at service flow rate		

Hydraulic Characteristics

Figure 1 shows the bed expansion of AMBERLITE IR120 Na resin, as a function of backwash flow rate and water temperature. Figure 2 shows the pressure drop data for AMBERLITE IR120 Na resin, as a function of service flow rate and water temperature. Pressure drop data are valid at the start of the service run with clear water and a correctly classified bed.

Figure 1: Bed Expansion

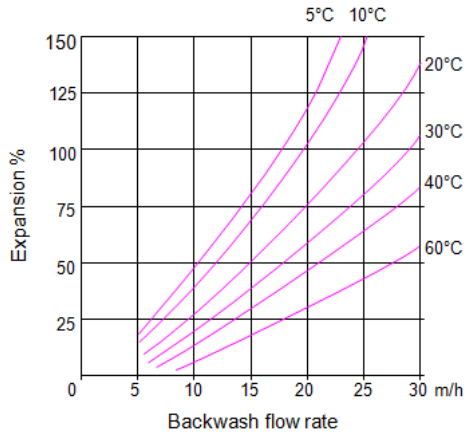
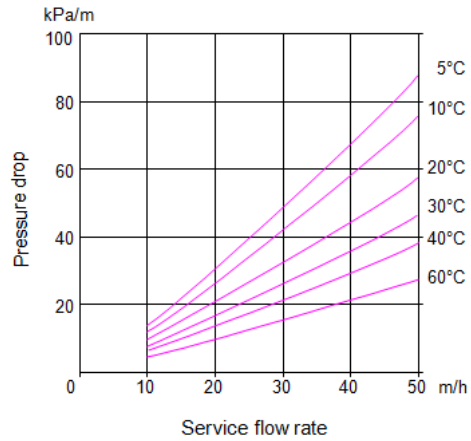


Figure 2: Pressure Drop



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