

PRODUCT DATA SHEET

AMBERLITE™ IR120 H
Industrial Grade Strong Acid Cation Exchanger

AMBERLITE IR120 H resin is a gel type strongly acidic cation exchange resin of the sulfonated polystyrene type. It is used for water demineralisation (in H^+ form) in co-flow regenerated units.

AMBERLITE IR120 H resin is an excellent general purpose cation exchange resin that can be used for a wide variety of water demineralisation applications.

PROPERTIES

Physical form _____	Amber spherical beads
Matrix _____	Styrene divinylbenzene copolymer
Functional group _____	Sulfonic acid
Ionic form as shipped _____	H^+
Total exchange capacity ^[1] _____	≥ 1.80 eq/L (H^+ form)
Moisture holding capacity ^[1] _____	53 to 58 % (H^+ form)
Shipping weight _____	800 g/L
Particle size	
Uniformity coefficient ^[1] _____	≤ 1.8
Harmonic mean size ^[1] _____	0.620 to 0.830 mm
< 0.300 mm ^[1] _____	2 % max
Maximum reversible swelling _____	$Na^+ \rightarrow H^+ \leq 11$ %

^[1] Contractual value

Test methods available upon request.

SUGGESTED OPERATING CONDITIONS

Maximum operating temperature _____	135 °C
Minimum bed depth _____	700 mm
Service flow rate _____	5 to 40 BV*/h
Regeneration	
Regenerants _____	HCl H_2SO_4
Level (g/L) _____	50 to 150 60 to 240
Concentration (%) _____	5 to 8 0.7 to 6
Minimum contact time _____	30 minutes
Slow rinse _____	2 BV at regeneration flow rate
Fast rinse _____	2 to 4 BV at service flow rate

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

PERFORMANCE

The operating capacity depends on several factors such as the water analysis and the level of regeneration. The data to calculate the operating capacity and the ionic leakage with co-flow regeneration are given in the Engineering Data Sheets: EDS 0264 A and EDS 0265 A.

LIMITS OF USE

AMBERLITE IR120 H resin is suitable for industrial uses. For other specific applications such as pharmaceutical, food processing or potable water applications, it is recommended that all potential

users seek advice from Rohm and Haas in order to determine the best resin choice and optimum operating conditions.

HYDRAULIC CHARACTERISTICS

Figure 1 shows the bed expansion of AMBERLITE IR120 H resin as a function of backwash flow rate and water temperature. Figure 2 shows the pressure drop data for AMBERLITE IR120 H 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.

Fig. 1 : Bed Expansion

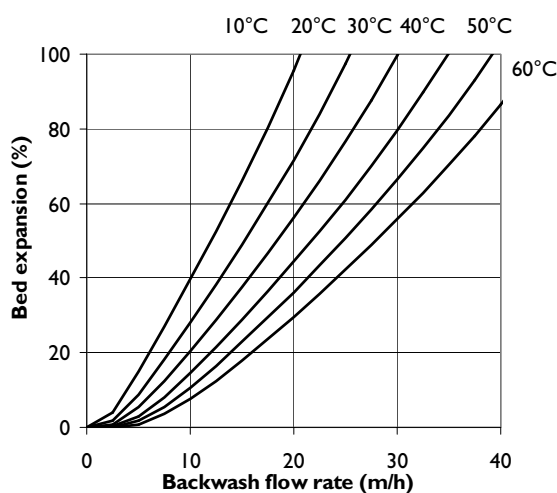
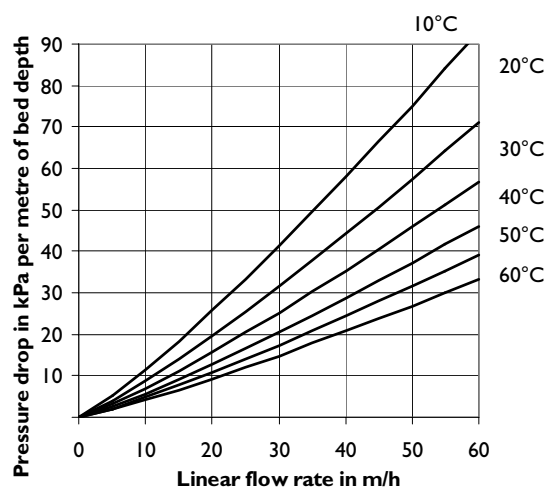


Fig. 2 : Pressure Drop



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