AMBERLITE® IR120 Na

Industrial Grade Strong Acid Cation Exchanger

PRODUCT DATA SHEET

AMBERLITE IR120 Na is a gel type strongly acidic cation exchange resin of the sulphonated 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. Its principal characteristics are excellent physical, chemical and thermal stability, good ion exchange kinetics and high exchange capacity.

PROPERTIES

Matrix	Styrene divinylbenzene copolymer
Functional groups	Sulphonates
Physical form	Amber beads
Ionic form as shipped	Na^+
Total exchange capacity [1]	≥ 2.0 eq/L (Na^+ form)
Moisture holding capacity [1]	45 to 50 % (Na^+ form)
Shipping weight	840 g/L
Specific gravity	1.26 to 1.30 (Na^+ form)
Particle size	
Uniformity coefficient	≤ 1.9
Harmonic mean size	600 to 800 µm
Fine contents [1]	< 0.300 mm : 2 % max
Maximum reversible swelling	$Na^+ \rightarrow H^+$: 11 %
Chemical resistance	Insoluble in dilute solutions of acids or bases and common solvents

[1] *Contractual value*

Test methods available upon request.

SUGGESTED OPERATING CONDITIONS

Minimum bed depth	700 mm		
Service flow rate	5 to 40 BV*/h		
Regenerant	HCl	H_2SO_4	NaCl
Level (g/L)	50 to 150	60 to 240	80 to 250
Concentration (%)	5 to 8	0.7 to 6	10
Flow rate (BV/h)	2 to 5	2 to 20	2 to 8
Minimum contact time	30 minutes		
Slow rinse	2 BV at regeneration flow rate		
Fast rinse	2to 4BV at service flow rate		

** 1 BV (Bed Volume) = 1 m^3 solution per m^3 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 0262 A, EDS 0264 A and EDS 0265 A.

LIMITS OF USE

AMBERLITE IR120 Na 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 Na, as a function of backwash flow rate and water temperature.
Figure 2 shows the pressure drop data for AMBERLITE IR120 Na, 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 1: Bed Expansion

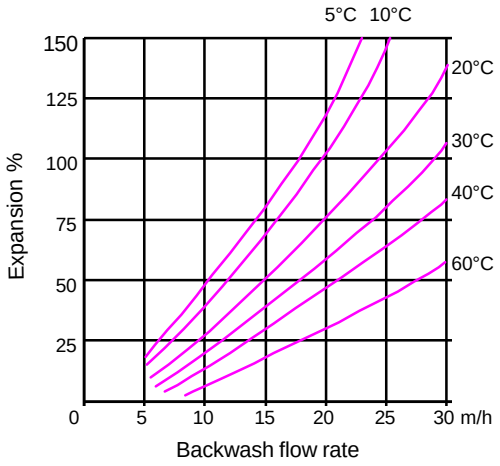
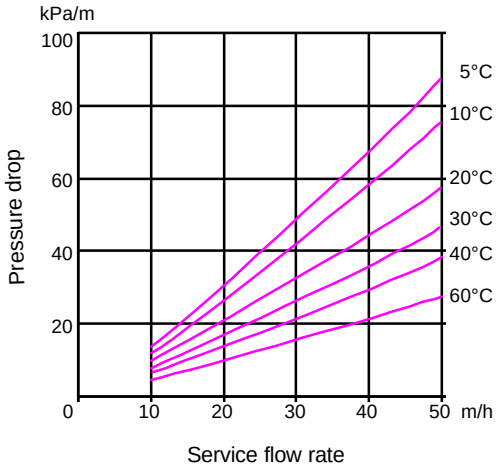


Figure 2: Pressure Drop



All our products are produced in ISO 9002 certified manufacturing facilities.

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