AMBERLITE® IR120 Na

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 demineralization (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	Sulfonic Acid
Physical form	Amber beads
Ionic form, as shipped	Sodium
Total exchange capacity	2.0 meq/ml minimum (Na^+ form)
Moisture holding capacity	45 to 50% (Na^+ form)
Shipping weight	52 lbs/ft^3
Harmonic mean size	0.60 to 0.80 mm
Uniformity coefficient	1.9 maximum
Screen Grading (wet)	16 to 50 mesh (US Std Screens)
Screen Analysis	3 % maximum on 16 mesh (US Std Screens) 2 % maximum thru 50 mesh (US Std Screens)
Maximum reversible swelling	$Na^+ \rightarrow H^+$: approximately 10%

Test methods are available on request.

SUGGESTED OPERATING CONDITIONS

pH Range	0 to 14		
Maximum Operating Tempeature	250 °F		
Minimum Bed Depth	24 inches		
Service Flow Rate	2 gpm/ft^3		
Regenerants (100 % basis)	**HCl**	**H_2SO_4**	**NaCl**
Flow Rate (gpm/ft^3)	0.5 to 1.0	0.5 to 1.0	0.5 to 1.0
Concentration (%)	4 to 10	1 to 5	10
Level (lbs/ft^3)	2 to 8	5 to 10	5 to 25
Minimum Contact Time	20 minutes		
Rinse Flow Rate	1 gpm/ft^3 initially, then 1.5 gal/ft^3		
Rinse Requirements	25 to 75 gal/ft^3		

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 AMBERLITE IR120 Na Engineering Data Sheets.

LIMITS OF USE

AMBERLITE IR120 Na is suitable for industrial used. 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 Company in order to determine the best resin choice and optimum operating conditions.

HYDRAULIC CHARACTERISTICS

Figure 1 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 clear water and a correctly classified bed. Figure 2 shows the bed expansion of AMBERLITE IR120 Na, as a function of backwash flow rate and water temperature.

Fig. 1 : Pressure Drop

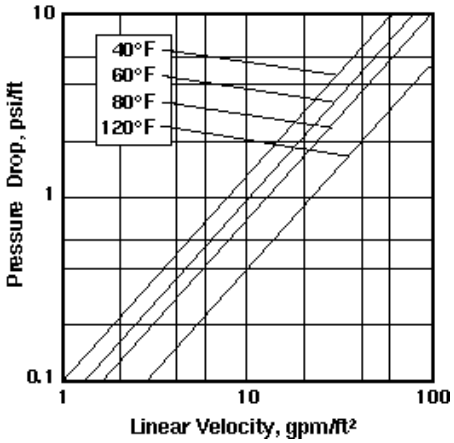
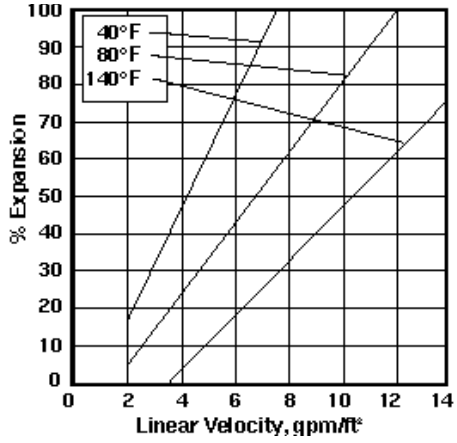


Fig. 2 : Bed Expansion



Rohm and Haas/Ion Exchange Resins - Philadelphia, PA - Tel. (800) RH AMBER - Fax: (215) 409-4534
Rohm and Haas/Ion Exchange Resins - 75579 Paris Cedex 12 - Tel. (33) 1 40 02 50 00 - Fax : 1 43 45 28 19

WEB SITE: http://www.rohmhaas.com/ionexchange