AMBERLITE® IRA402 Cl

Strong Base Anion Exchanger

PRODUCT DATA SHEET

AMBERLITE IRA402 Cl is a type 1, gelular, premium grade, strongly basic, anion exchange resin. It is based on crosslinked polystyrene and has high regeneration efficiency and excellent rinse performance. It is used in co-flow regeneration and conventional counterflow systems with downflow loading and upflow regeneration with air or water holddown. Combined with a strong acid cation exchanger, AMBERLITE IRA402 Cl resin reduces both strong and weak acid concentrations to extremely low levels. Its main use is water demineralization. Other fields of application include the treatment of electroplating waste and the isolation of anionic metals.

PROPERTIES

Matrix	Polystyrene divinylbenzene copolymer
Functional Groups	Quaternary ammonium
Physical Form	Pale yellow translucent beads
Ionic Form as Shipped	Chloride
Total Exchange Capacity	1.2 meq/ml minimum (Cl^- form)
Moisture Holding Capacity	49 to 60 % (Cl^- form)
Shipping Weight	42 lbs/ft^3
Harmonic Mean Size	0.60 to 0.75 mm
Uniformity Coefficient	1.6 maximum
Screen Grading (wet)	16 to 50 mesh (US Std Screens)
Screen Analysis	5 % maximum on 16 mesh (US Std Screens) 1 % maximum thru 50 mesh
Maximum Reversible Swelling	$Cl^- \rightarrow OH^-$: approximately 30 %

Test methods are available on request.

SUGGESTED OPERATING CONDITIONS

pH Range	0 to 14
Maximum Operating Temperature	140 °F (OH^- form) / 170 °F (Cl^- form)
Minimum Bed Depth	24 inches
Service Flow Rate	1 to 3 gpm/ft^3
Regenerant (100% basis)	**NaOH**
Flow Rate	0.25 to 0.5 gpm/ft^3
Concentration	2 to 4 %
Level	2 to 12 lbs/ft^3
Minimum Contact Time	30 minutes
Rinse Flow Rate	0.25 to 0.5 gpm/ ft^3 initially to displace regenerant, then 1.5 gpm/ft^3
Rinse Water Requirements	75 gal/ft^3 (approximate)

LIMITS OF USE

AMBERLITE IRA402 Cl is suitable for industrial uses. For all 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 expected pressure drop per foot of bed depth of AMBERLITE IRA402 Cl in normal downflow operation with water at various temperatures as a function of flow rate.
Figure 2 shows the bed expansion of AMBERLITE IRA402 Cl as a function of backwash flow rate and water temperature. AMBERLITE IRA402 Cl should be backwashed for 10 minutes after each operating cycle to reclassify the resin beads and purge the bed of suspended insoluble material which may collect on top of the resin.

Fig. 1 : Pressure Drop

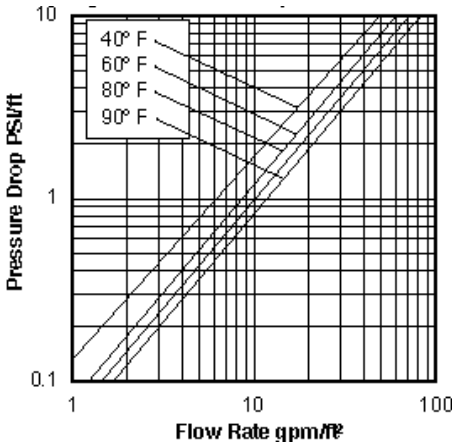
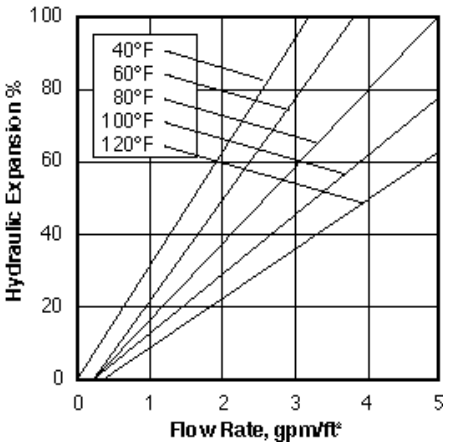


Fig. 2 : Bed Expansion



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