



AMBERLITE™ IRA458RF Cl Resin

Industrial Grade Strong Base Anion Exchanger

Description

AMBERLITE™ IRA458RF Cl Resin is an acrylic gel type strong base anion exchange resin, with distinct chemical and physical properties. It combines high operating capacity with low silica leakage values. The flexible acrylic structure of AMBERLITE IRA458RF Cl Resin allows for effective adsorption and desorption of naturally occurring organic molecules, such as humic and fulvic acids, that are present in many water supplies. The particle size distribution of AMBERLITE IRA458RF Cl Resin has been specially selected to give optimum performance in floating bed and packed bed applications.

Typical Physical and Chemical Properties

Physical form		Translucent white spherical beads
Matrix		Crosslinked acrylic gel structure
Functional group		Quaternary ammonium
Ionic form as shipped		Chloride
Total exchange capacity, min.	eq/L	≥1.25 (Cl- form)
Particle size		
Harmonic mean diameter	mm	0.700–1.000
Uniformity coefficient		≤1.8
< 0.355 mm	%	0.5 max
Moisture retention capacity	%	57–64 (Cl- form)
Reversible swelling	% Cl ⁻ →OH ⁻ *	≤ 20
Shipping density**	g/L	730 (45.5 lbs/ft ³)

*1 BV (Bed Volume) = 1 m³ solution per m³ resin or 7.5 gals per ft³ resin

Suggested Operating Conditions

Maximum operating temperature	35°C (95°F)
Minimum bed depth	1000 mm (preferably > 1400 mm) (3.3 ft >4.6 ft)
Service flow rate	5–40 BV*/h
Regeneration	
Regenerant	NaOH
Level	30–80 g/L (2-5 lb/ft ³)
Concentration	2–4%
Minimum contact time	30 minutes
Slow rinse	2 BV at regeneration flow rate (0.25 gpm/ft ³)
Fast rinse	4–8 BV at service flow rate (0.5-1 gpm/ft ³)

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Hydraulic Characteristics

Figure 1 shows the bed expansion of AMBERLITE™ IRA458RF CI Resin as a function of backwash flow rate and water temperature. Figure 2 shows the pressure drop data for AMBERLITE IRA458RF CI 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

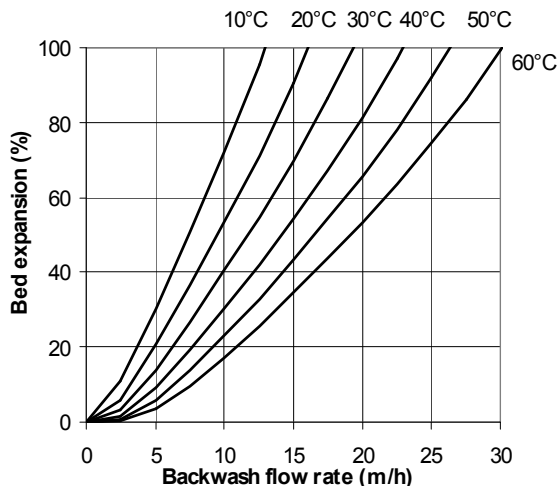
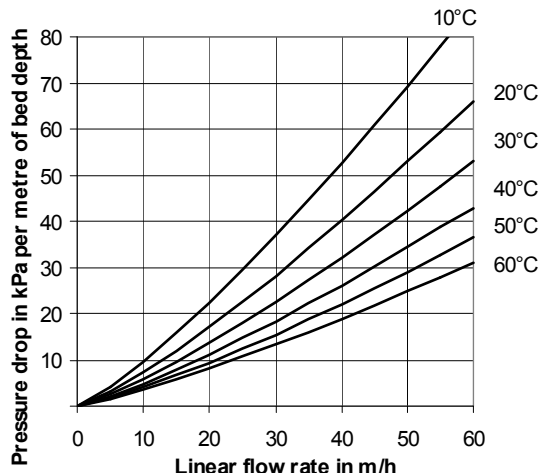


Figure 2 : Pressure Drop



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DOW™ Ion Exchange Resins

For more information about DOW™ resins, call the Dow Water & Process Solutions business:

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Warning: Oxidizing agents such as nitric acid attack organic ion exchange resins under certain conditions. This could lead to anything from slight resin degradation to a violent exothermic reaction (explosion). Before using strong oxidizing agents, consult sources knowledgeable in handling such materials.

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