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AMBERLITE™ IRA458RF Cl

Industrial Grade Strong Base Anion Exchanger

Introduction

AMBERLITE IRA458RF Cl resin is an acrylic gel type strongly basic anion exchange resin, with unique 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. (RF means reverse flow).

Properties

Physical form	Translucent white spherical beads
Matrix	Crosslinked acrylic gel structure
Functional group	Quaternary ammonium
Ionic form as shipped	Chloride
Total exchange capacity	≥ 1.25 eq/L (Cl^- form)
Moisture holding capacity	57 to 64 % (Cl^- form)
Shipping weight	720 g/L
Particle size	
Uniformity coefficient	≤ 1.8
Harmonic mean size	0.700 to 1.000 mm < 0.355 mm 0.5 % max
Reversible swelling	$Cl^- \rightarrow OH^-$ ≤ 20 %

Suggested Operating Conditions

Maximum operating temperature	35°C
Minimum bed depth	1000 mm (preferably > 1400 mm)
Service flow rate	5 to 40 BV*/h
Regeneration	
Regenerant	NaOH
Level	30 to 80 g/L
Concentration	2 to 4 %
Minimum contact time	30 minutes
Slow rinse	2 BV at regeneration flow rate
Fast rinse	4 to 8 BV at service flow rate

Performance

The engineering data sheet EDS 0184 A provides information to calculate the operating capacity and silica leakage of AMBERLITE IRA458RF Cl resin used in water treatment.

Limits of use

AMBERLITE IRA458RF Cl resin 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 in order to determine the best resin choice and optimum operating conditions.

Hydraulic Characteristics

Figure 1 shows the bed expansion of AMBERLITE IRA458RF Cl resin as a function of backwash flow rate and water temperature.

Figure 2 shows the pressure drop data for AMBERLITE IRA458RF Cl 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

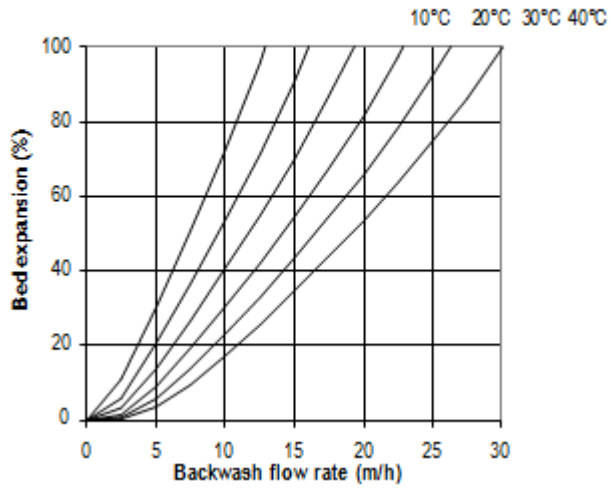
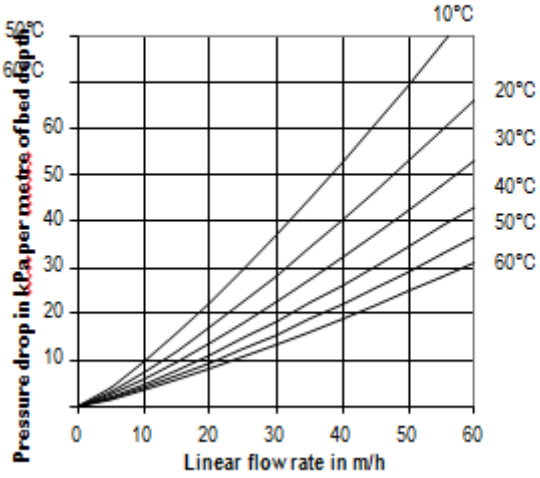


Fig. 2 : Pressure Drop



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

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