



AMBERLITE™ IRA402 CI

Industrial Grade Strong Base Anion Exchanger

Introduction

AMBERLITE IRA402 CI resin is a type 1 strongly basic, clear gel, anion exchange resin. It has a crosslinked polystyrene structure that is designed to give an optimum balance of capacity and regeneration efficiency in water treatment applications. It is widely used in co-flow regenerated systems and can also be used in conventional counterflow systems such as those using air or water holddown. In demineralisation applications AMBERLITE IRA402 CI resin can remove both strong and weak acids including silica. These characteristics make AMBERLITE IRA402 CI an excellent general purpose anion exchange resin for a wide variety of water treatment applications.

Properties

Physical form	Pale yellow translucent spherical beads
Matrix	Styrene divinylbenzene copolymer
Functional group	Trimethyl ammonium
Ionic form as shipped	Chloride
Total exchange capacity	≥ 1.20 eq/L (Cl ⁻ form)
Moisture holding capacity	49 to 60 % (Cl ⁻ form)
Shipping weight	670 g/L
Particle size	
Uniformity coefficient	≤ 1.6
Harmonic mean size	0.600 to 0.750 mm < 0.300 mm 1.0 % max
Reversible swelling	Cl ⁻ → OH ⁻ ≤ 30 %

Suggested Operating Conditions

Maximum operating temperature	60 °C
Minimum bed depth	700 mm
Service flow rate	8 to 40 BV*/h
Regeneration	
Regenerant	NaOH
Level	60 to 150 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

Limits of use

AMBERLITE IRA402 CI 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 IRA402 CI resin as a function of backwash flow rate and water temperature.

Figure 2 shows the pressure drop data for AMBERLITE IRA402 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.

Fig. 1 : Bed Expansion

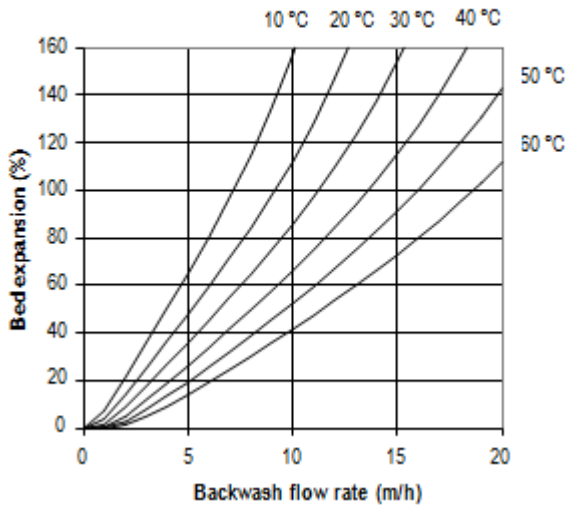
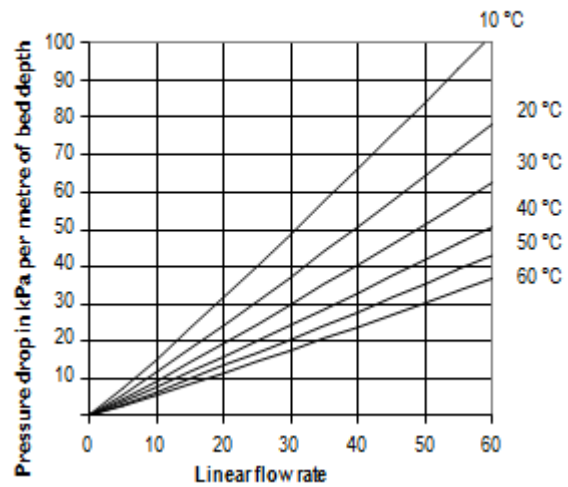


Fig. 2 : Pressure Drop



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