



AMBERLITE® IRA900 Cl

Industrial Grade Strong Base Anion Exchanger

PRODUCT DATA SHEET

AMBERLITE IRA900 Cl is a macroreticular polystyrene type 1 strong base anion exchange resin containing quaternary ammonium groups. This allows complete removal of all anions, including weakly dissociated ones like silica. The macroreticular structure embodies fixed large pores, presenting a

sponge-like matrix. This feature combined with the strong basicity permits the removal of large size soluble organic molecules. In addition the macroreticular structure imparts superior resistance to mechanical and osmotic shock.

PROPERTIES

Matrix _____	Styrene divinylbenzene copolymer
Functional groups _____	$-N^+(CH_3)_3$
Physical form _____	Ivory beads
Ionic form as shipped _____	Chloride
Total exchange capacity ^[1] _____	≥ 1.0 eq/L (Cl ⁻ form)
Moisture holding capacity ^[1] _____	58 to 64 % (Cl ⁻ form)
Specific gravity _____	1.050 to 1.080 (Cl ⁻ form)
Shipping weight _____	700 g/L
Particle size _____	
Harmonic mean size _____	0.650 - 0.820 mm
Uniformity coefficient _____	≤ 1.80
Fine contents ^[1] _____	< 0.300 mm : 0.5 % max
Coarse beads _____	> 1.180 mm : 3.0 % max
Maximum reversible swelling _____	Cl ⁻ → OH ⁻ : about 25 %
Chemical resistance _____	Insoluble in dilute solutions of acids or bases and common solvents

^[1] Contractual value

Test methods are available on request.

SUGGESTED OPERATING CONDITIONS

(WATER TREATMENT)

Minimum bed depth _____	700 mm
Service flow rate _____	up to 120 BV*/h
Regenerant _____	NaOH
Flow rate _____	2 to 8 BV/h
Concentration _____	2 to 4 %
Level _____	50 to 150 g/L
Minimum contact time _____	30 minutes
Slow rinse _____	2 BV at regeneration flow rate
Fast rinse _____	4 to 8 BV at service flow rate

* 1 BV (Bed Volume) = 1 m³ solution per m³ resin

APPLICATIONS

AMBERLITE IRA900 Cl is the ideal choice in all cases where the highest quality of deionised water is desired. Due to its excellent mechanical strength and good kinetics, it is particularly recommended for applications such as condensate polishing where the resin can be operated at flow rates up to 120 BV/h or 120 m/h. AMBERLITE IRA900 Cl can be used as an organic scavenger placed in front of a deionization system. Working in the chloride form, it removes the more harmful organic substances from the raw water, protecting subsequent anion exchange resins from possible irreversible organic fouling.

AMBERLITE IRA900 Cl is also suitable for colour removal from sugar syrups.

PERFORMANCE

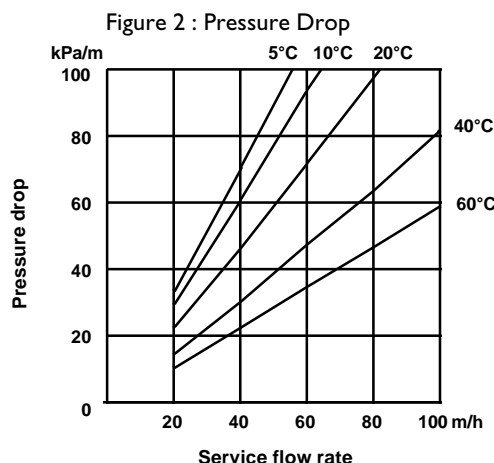
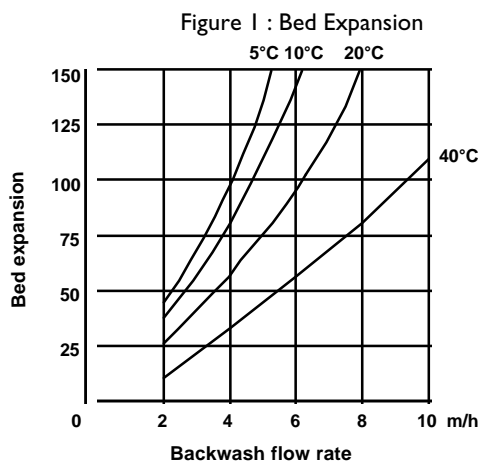
The engineering data sheet EDS 0258 A provide information to calculate the operating capacity and silica leakage of AMBERLITE IRA900 Cl used in water treatment.

LIMITS OF USE

Rohm and Haas manufactures special resins for food processing and potable water applications. As governmental regulations vary from country to country, it is recommended that potential users seek advice from their Amberlite representative in order to determine the best resin choice and optimum operating conditions.

HYDRAULIC CHARACTERISTICS (Water Treatment)

Figure 1 shows the bed expansion of AMBERLITE IRA900 Cl, as a function of backwash flow rate and water temperature. Figure 2 shows the pressure drop data for AMBERLITE IRA900 Cl, as a function of service flow rate and water temperature. Pressure drop data are valid at the start of the service run with a clear water and a correctly classified bed.



All our products are produced in ISO 9002 certified manufacturing facilities.

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Ion exchange resins and polymeric adsorbents, as produced, contain by-products resulting from the manufacturing process. The user must determine the extent to which organic by-products must be removed for any particular use and establish techniques to assure that the appropriate level of purity is achieved for that use. The user must ensure compliance with all prudent safety standards and regulatory requirements governing the application. Except where specifically otherwise stated, Rohm and Haas Company does not recommend its ion exchange resins or polymeric adsorbents, as supplied, as being suitable or appropriately pure for any particular use. Consult your Rohm and Haas technical representative for further information. Acidic and basic regenerant solutions are corrosive and should be handled in a manner that will prevent eye and skin contact. Nitric acid and other strong oxidising agents can cause explosive type reactions when mixed with Ion Exchange resins. Proper design of process equipment to prevent rapid buildup of pressure is necessary if use of an oxidising agent such as nitric acid is contemplated. Before using strong oxidising agents in contact with Ion Exchange Resins, consult sources knowledgeable in the handling of these materials.

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