

PRODUCT DATA SHEET

AMBERLITE™ IRA900 Cl **Industrial Grade Strong Base Anion Exchanger**

AMBERLITE IRA900 Cl resin 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 ions such as silica. The macroreticular

structure 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

Physical form _____	Tan spherical beads
Matrix _____	Styrene divinylbenzene copolymer
Functional group _____	Trimethyl ammonium
Ionic form as shipped _____	Chloride
Total exchange capacity ^[1] _____	≥ 1.00 eq/L (Cl ⁻ form)
Moisture holding capacity ^[1] _____	58 to 64 % (Cl ⁻ form)
Shipping weight _____	700 g/L
Particle size	
Uniformity coefficient ^[1] _____	≤ 1.80
Harmonic mean size ^[1] _____	0.650 to 0.820 mm
< 0.300 mm ^[1] _____	0.5 % max
Reversible swelling _____	Cl ⁻ → OH ⁻ ≤ 25 %

^[1] Contractual value

Test methods are available on request.

SUGGESTED OPERATING CONDITIONS

Maximum operating temperature _____	60 °C
Minimum bed depth _____	700 mm
Service flow rate _____	up to 120 BV*/h
Regeneration	
Regenerant _____	NaOH
Level _____	50 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

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

APPLICATIONS

Due to its macroreticular structure, AMBERLITE IRA900 Cl resin is useful in water treatment applications where organic fouling is a concern for strong base, type 1, resins. AMBERLITE IRA900 Cl resin also can be used as an organic scavenger placed in front of a deionization system. Working in the chloride form, it removes the natural organic substances from the raw water, protecting subsequent anion exchange resins from possible irreversible organic fouling.

PERFORMANCE

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

LIMITS OF USE

AMBERLITE IRA900 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 IRA900 Cl resin, as a function of backwash flow rate and water temperature. Figure 2 shows the pressure drop data for AMBERLITE IRA900 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.

Figure 1 : Bed Expansion

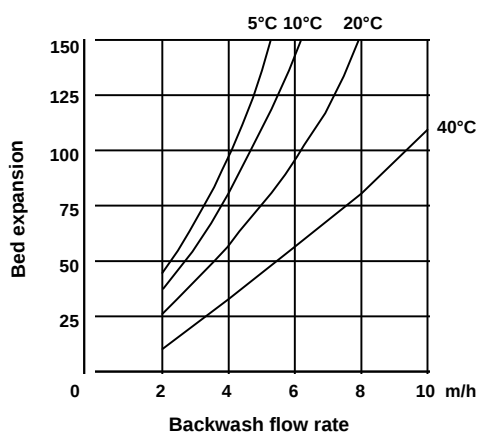
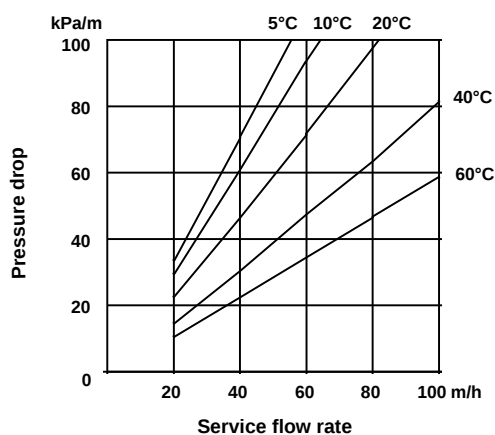


Figure 2 : Pressure Drop



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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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