# 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 | $Cl^- \rightarrow OH^-$ : 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 $m^3$ solution per $m^3$ 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.

Figure 1 : Bed Expansion

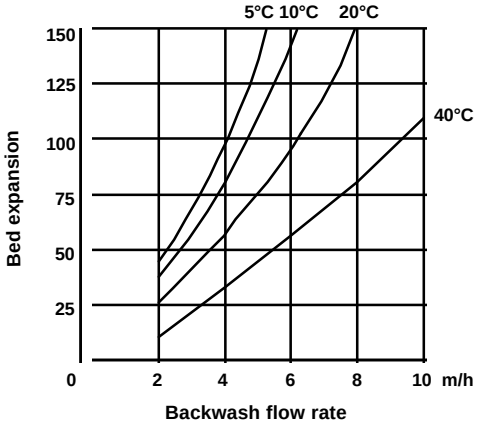
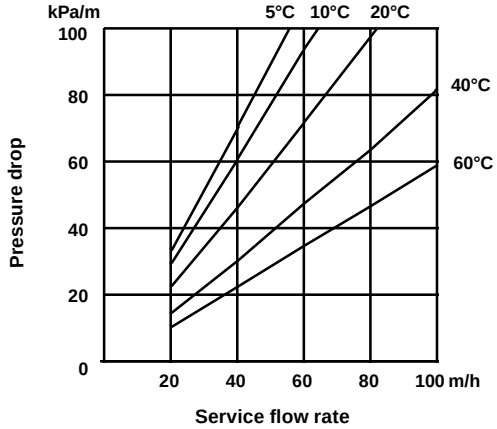



Figure 2 : Pressure Drop




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

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