



AMBERLITE™ IRA900 CI

Industrial Grade Strong Base Anion Exchanger

Introduction

AMBERLITE IRA900 CI 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 | ≥ 1.00 eq/L (Cl ⁻ form) |
| Moisture holding capacity | 58 to 64 % (Cl ⁻ form) |
| Shipping weight | 700 g/L |
| Particle size | |
| Uniformity coefficient | ≤ 1.80 |
| Harmonic mean size | 0.650 to 0.820 mm < 0.300 mm 0.5 % max |
| Reversible swelling | Cl ⁻ → OH ⁻ ≤ 25 % |

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 |

Applications

Due to its macroreticular structure, AMBERLITE IRA900 CI resin is useful in water treatment applications where organic fouling is a concern for strong base, type 1, resins. AMBERLITE IRA900 CI 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 CI resin used in water treatment.

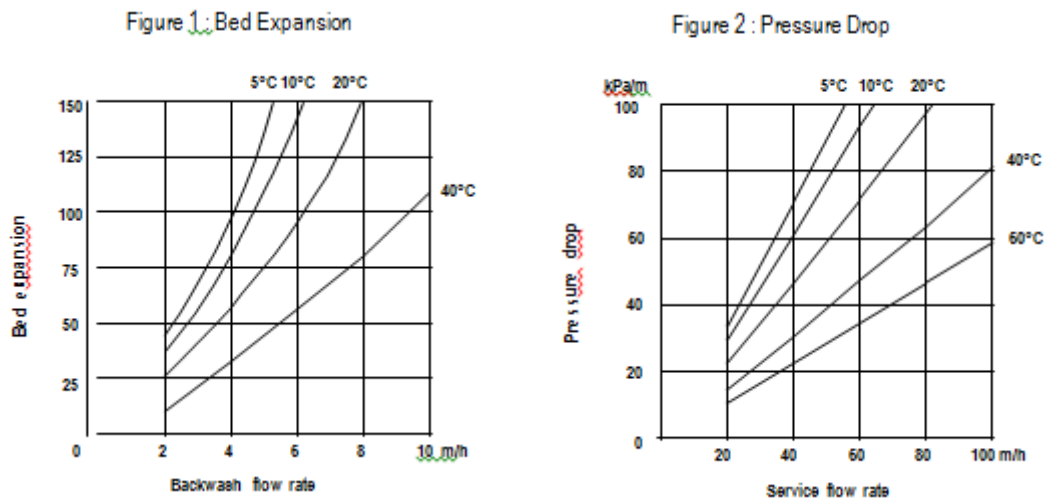
Limits of use

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.



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

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