PRODUCT DATA SHEET

# AMBERLITE™ IR120 Na

## Industrial Grade Strong Acid Cation Exchanger

AMBERLITE IR120 Na resin is a gel type strongly acidic cation exchange resin of the sulfonated polystyrene type. It is used for water softening (in $Na^+$ form) as well as for water demineralisation (in $H^+$ form) in co-flow regenerated units. AMBERLITE IR120 Na resin is an excellent general purpose cation exchange resin that can be used for a wide variety of industrial water treatment applications including both softening and demineralisation.

## PROPERTIES

| | |
|---|---|
| Physical form | Amber spherical beads |
| Matrix | Styrene divinylbenzene copolymer |
| Functional group | Sulfonate |
| Ionic form as shipped | $Na^+$ |
| Total exchange capacity [1] | ≥ 2.00 eq/L ($Na^+$ form) |
| Moisture holding capacity [1] | 45 to 50 % ($Na^+$ form) |
| Shipping weight | 840 g/L |
| Particle size | |
| Uniformity coefficient [1] | ≤ 1.9 |
| Harmonic mean size [1] | 0.600 to 0.800 mm |
| < 0.300 mm [1] | 2 % max |
| Maximum reversible swelling | $Na^+ \rightarrow H^+$ ≤ 11 % |

[1] *Contractual value*

*Test methods available upon request.*

## SUGGESTED OPERATING CONDITIONS

| | | | |
|---|---|---|---|
| Maximum operating temperature | 135 °C | | |
| Minimum bed depth | 700 mm | | |
| Service flow rate | 5 to 40 BV*/h | | |
| Regeneration | | | |
| Regenerant | HCl | $H_2SO_4$ | NaCl |
| Level (g/L) | 50 to 150 | 60 to 240 | 80 to 250 |
| Concentration (%) | 5 to 8 | 0.7 to 6 | 10 |
| Minimum contact time | 30 minutes | | |
| Slow rinse | 2 BV at regeneration flow rate | | |
| Fast rinse | 2 to 4 BV at service flow rate | | |

** 1 BV (Bed Volume) = 1 $m^3$ solution per $m^3$ resin*

## PERFORMANCE

The operating capacity depends on several factors such as the water analysis and the level of regeneration. The data to calculate the operating capacity and the ionic leakage with co-flow regeneration are given in the Engineering Data Sheets: EDS 0262 A, EDS 0264 A and EDS 0265 A.

## LIMITS OF USE

AMBERLITE IR120 Na resin is suitable for industrial uses. For 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 IR120 Na resin, as a function of backwash flow rate and water temperature. Figure 2 shows the pressure drop data for AMBERLITE IR120 Na 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

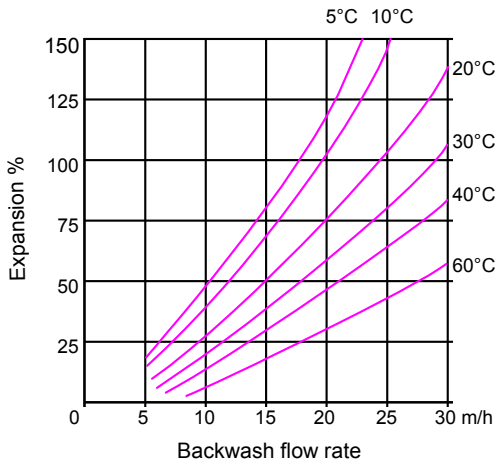
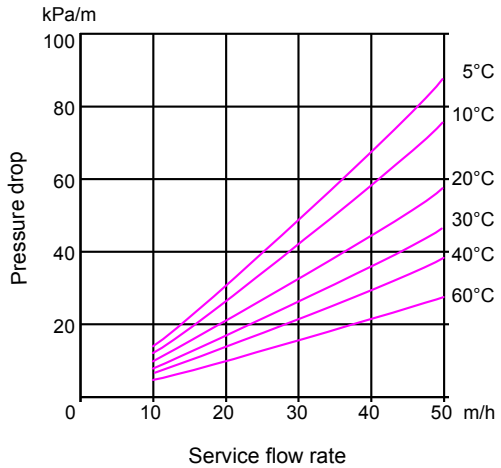



Figure 2: Pressure Drop

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