# AMBERLITE® IRA402 Cl

Industrial Grade Strong Base Anion Exchanger

PRODUCT DATA SHEET

AMBERLITE IRA402 Cl is a premium grade strongly basic anion exchange resin of the type 1, with a clear gel structure. It is based on crosslinked polystyrene and has a very high bead integrity, good regeneration efficiency and excellent rinse performance. It is used in co-flow regeneration and conventional counterflow systems with downflow loading and upflow regeneration with air or water holddown. Combined with a strong acid cation exchanger, AMBERLITE IRA402 Cl reduces both strong and weak acid concentrations to extremely low levels. Its main use is therefore water demineralisation. Other fields of application include the treatment of electroplating waste and the isolation of anionic metal complexes.

## PROPERTIES

| | |
|---|---|
| Matrix | Styrene divinylbenzene copolymer |
| Functional groups | $-N^+(CH_3)_3$ |
| Physical form | Pale yellow translucent beads |
| Ionic form as shipped | Chloride |
| Total exchange capacity [1] | ≥ 1.2 eq/L ($Cl^-$ form) |
| Moisture holding capacity [1] | 49 to 60 % ($Cl^-$ form) |
| Specific gravity | 1.063 to 1.093 ($Cl^-$ form) |
| Shipping weight | 670 g/L |
| Particle size | |
| Uniformity coefficient | ≤ 1.6 |
| Harmonic mean size | 600 - 750 µm |
| Fine contents [1] | < 0.300 mm : 1.0 % max |
| Coarse beads | > 1.180 mm : 5.0 % max |
| Maximum reversible swelling | $Cl^- \rightarrow OH^-$ : 30 % |

[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 | 5 to 40 BV*/h |
| Regenerant | NaOH |
| Flow rate | 2 to 8 BV/h |
| Concentration | 2 to 4 % |
| Level | 60 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*

## HYDRAULIC CHARACTERISTICS

AMBERLITE IRA402 Cl gives a pressure drop of about 13 kPa/m bed depth per 10 m/h at 15°C.
A backwash flow rate of 6.5 m/h gives a bed expansion of about 70 % at 15°C.
Pressure drop data are valid at the start of the service run with a clear water and a correctly classified bed.

## LIMITS OF USE

AMBERLITE IRA402 Cl 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.

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

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