AMBERLITE® IRC748

Industrial Grade Chelating Resin for Metals Removal

PRODUCT DATA SHEET

AMBERLITE IRC748 is an iminodiacetic acid chelating cation exchange resin with high selectivity for calcium, magnesium and strontium in chloralkali brines. Amberlite IRC748 also exhibits high selectivity for heavy metal cations over alkali metal ions found in various process and waste streams. Selectivity is achieved by the iminodiacetic acid functionality chemically bound to a macroreticular resin matrix. Because of the high preference of Amberlite IRC748 for metals and excellent kinetic performance, this resin can remove metals from solutions even in the presence of high concentrations of sodium or calcium salts, with very low metal leakage. The macroreticular structure of Amberlite IRC748 is highly resistant to osmotic shock and has excellent physical stability. The typical properties of Amberlite IRC748 are shown below.

TYPICAL PROPERTIES

Matrix	Macroporous styrene divinylbenzene
Functional groups	Iminodiacetic acid
Physical form	Opaque, beige beads
Ionic form as shipped	Na^+
Total exchange capacity	≥ 1.25 eq/L (Na^+ form)
Moisture holding capacity	60.0 to 65.0 % (Na^+ form)
Bulk density	685 to 760 g/L (Na^+ form)
Particle size	
Harmonic mean size	500 - 650 µm
Uniformity coefficient	≤ 1.7
< 0.300 mm	1.0% max
> 1.100 mm	5.0% max
Typical reversible swelling	$H^+ \rightarrow Na^+$: 30 %

SUGGESTED OPERATING CONDITIONS

Maximum operating temperature	90°C (Na^+ form)
pH range	1.5 to 14 (depending on applications)
Service flow rate	6 to 32 BV/h
Regenerant	HCl or H_2SO_4
Concentration	5 to 10 %
Flow rate	2 to 4 BV/h
Sodium form conversion	1 - 4 % NaOH, Flow rate : 2 to 4 BV/h
Pressure drop (at 20° C)	11 kPa/m bed depth per 10 m/h
	0.75 psi/ft bed depth at 4.1 gpm/ft^2

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