

ION EXCHANGE RESIN

IONEX M - 500

Product Information

IONEX M-500 is a type I, gel strong-base anion exchange resin with high operating capacity and the ability to achieve pure water quality with low residual silica levels. IONEX M-500 is supplied as spherical beads in the chloride form, but can be supplied in OH form too (optional). IONEX M-500 is proven excellent product to use for demineralization plant to reduce and eliminate anions in water.

Physical and Chemical Characteristics

Polymer matrix structure	Polystyrene crosslinked with 4% DVB
Functional group	R-N (CH ₃) ₃ +
Ionic form as shipped	Chloride (Cl ⁻)
Physical form and appearance	Clear Spherical Beads
Sphericity	95 %, minimum
Screen size range – US Standard screen	16 – 50 Mesh, wet
Particle size range	+1.2 mm < 5%, 0.3 mm < 1%
Uniformity coefficient	1.6 max
Water retention, Cl ⁻ form	48 – 58 %
Swelling Cl ⁻ to OH ⁻	20 %
Shipping weight, Cl ⁻ form	660 - 710 g/l (43 lbs/cu.ft, approx.)
Total exchange capacity, Cl ⁻ form	1.3 eq/liter
pH range	0 – 14
Storability of the product	Minimum 2 years
Storability at temperature	-10 – 40 °C

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Recommended Operating Condition

Maximum temperature Cl ⁻ form	100 °C max.
OH ⁻ form	60 °C max.
Operating pH range	0 - 14
Maximum pressure loss, kPa	150
Minimum bed Depth	0.8 m
Freeboard as % of resin volume	80 – 100 %
Cocurrent Regeneration	
Service flowrate	40 m/h
Backwash flowrate	14 – 20 m/h
Backwash expansion	60 – 80 %
Regenerant Concentration	4 - 6 % NaOH
Regenerant velocity	5 - 7 m/h
Contact Time	30 - 60 Minutes
Regenerant consumption	160 – 00 g NaOH/liter resin
Slow rinse Rate	5 – 6 m/h
Slow rinse water consumption	5 – 6 BV
Fast rinse Rate	Same as service flowrate
Fast rinse water consumption	5 – 7 BV
Countercurrent Regeneration	
Service flowrate	40 m/h
Backwash flowrate	14 – 20 m/h
Backwash expansion	60 – 80 %
Regenerant Concentration	4 - 6 % NaOH
Regenerant velocity	5 - 7 m/h
Contact Time	30 - 60 Minutes
Regenerant consumption	30 – 50 g NaOH/liter resin
Slow rinse Rate	5 – 6 m/h
Slow rinse water consumption	3 – 4 BV
Fast rinse Rate	Same as service flowrate
Fast rinse water consumption	3 – 4 BV