PT TEKNOLOGI AIR PERKASA

Water & Waste Water Treatment Specialist

Product Information

IonEx M-500

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

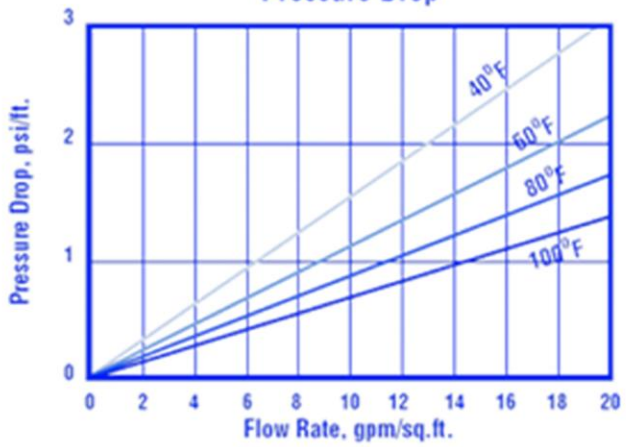
Physical and Chemical Characteristics	
Polymer matrix structure	Polystyrene crosslinked with 4% DVB
Functional group	R-N $(CH_3)_3^+$
Ionic form, as shipped	Chloride (Cl^-)
Physical form and appearance	Clear Spherical Beads
Sphericity	95% min.
Screen size range --- U.S. Standard screen	16 - 50 mesh, wet
Particle size range	+1.2 mm < 5%, -0.3 mm < 1%
Uniformity coefficient	1.6 max.
Water retention, Cl^- form	48 - 58%
Swelling $Cl^- \rightarrow OH^-$	20 %
Shipping weight, Cl^- form	660 - 710 g/l (43 lbs/cu.ft, approx.)
Total exchange capacity, Cl^- form	1.3 eq/l min.
pH range	0–14

Recommended Operating Condition	
Maximum temperature Cl^- form OH^- form	 100 °C (212 °F) max. 60 °C (140 °F) max.
Operating pH range	0 – 12
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, max
Backwash flowrate	14 – 20 m/h
Backwash expansion	60 - 80 %
Regeneration Regenerant Concentration Flow Rate Contact Time Regenerant consumption	 4 - 6% NaOH 5 - 7 m/h 30 - 60 Minutes 60 – 100 g/liter resin
Slow rinse rate	5 - 6 m/h
Slow rinse volume	5 - 6 BV
Fast rinse rate	Same as Service Flow Rate
Fast rinse volume	5 – 7 BV
Countercurrent Regeneration	
Regeneration Regenerant Concentration Flow Rate Contact Time Regenerant consumption	 4 - 6% NaOH 5 - 7 m/h 30 - 60 Minutes 30 – 50 g/liter resin
Slow rinse rate	5 - 6 m/h
Slow rinse volume	3 - 4 BV
Fast rinse rate	Same as Service Flow Rate
Fast rinse volume	3 – 4 BV

IonEx M-500

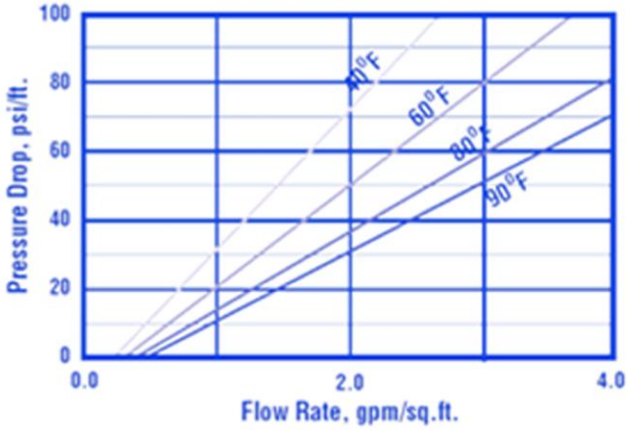
Hydraulic Properties

Pressure Drop



Pressure Drop: The graph above shows the expected pressure loss per foot of bed depth as a function of flow rate at various Temperatures.

Backwash Expansion



Backwash: After each cycle the resin bed should be backwashed at a rate that expands the bed 50 to 60 percent. That will remove any foreign matter and reclassify the bed.

SAFETY INSTRUCTION

Refer to MSDS (material safety data sheet) for transportation, application and for disposal.

Avoid strong oxidants (e.g. nitric acid, chlorine, etc) and sunlight that can cause damage to the resin. Nitric acid can cause violent reactions if contacts with ion exchange resin.