

TULSION®



A-2XMP

MACROPOROUS WEAK BASE ANION EXCHANGE RESIN

Tulsion®A-2XMP is an extremely durable macroporous weak base anion exchange resin characterised by tertiary amine groups attached to a styrene divinylbenzene copolymer matrix. It has a unique physical structure which gives it superior kinetics and greater resistance to osmotic shock than gel type weak base anion exchangers.

Tulsion®A-2XMP yields exceptionally high operating capacity on caustic soda regeneration and has low rinse requirements. It has a higher resistance to organic matter than gel type anion exchangers. Tulsion A-2XMP is supplied as moist spherical beads in free base form, ready to use.

Tulsion A-2XMP removes free mineral acid ions like chloride, sulphate, nitrate etc. but will not remove weak acid ions like silica and carbondioxide. In a demineralization system, Tulsion A-2XMP can be placed preceding a strong base anion exchanger. This system offers a more economical regeneration cost, as Tulsion A-2XMP operates at a very high regeneration efficiency in comparison to strong base exchangers. Additional savings can be achieved by regenerating the weak base and strong base exchangers in series. The design must, however take care to prevent silica precipitation on the weak base exchanger. Tulsion A-2XMP placed preceding a strong base anion exchanger also serves to protect it from organic fouling.

TYPICAL CHARACTERISTICS

Type	: Macroporous weak base anion resin
Matrix Structure	: Cross Linked polystyrene
Functional group	: Tertiary amine
Physical form	: Moist spherical beads
Ionic form	: Free Base
Particle Size	: 0.3-1.2mm
Screen Size U.S.S	: 16 to 50
Total Exchange capacity	: 1.50 meq/ml
Operating pH range	: 0-14
Moisture content	: 45-50%
Reversible swelling (approx.)	: Free Base to Cl ⁻ 20%
Backwash settled density	: 40 to 45 lbs/ft ³ (640-680 g/l)

TYPICAL OPERATING CONDITIONS

Maximum Operating Temp.	: 175°F (80°C)
Resin bed Depth	: 24"(600 mm)
Maximum Service Flow	: 5.0 gpm/ft ³ (40 M ³ /Hr/M ³)
Backwash Expansion space	: 50-70%
Backwash Expansion Flow Rate at 77°F(25°C)	: 1.6 to 2.5 gpm/ft ² (4 to 6 M ³ /Hr/M ²)
Regenerant	: NaOH, Na ₂ CO ₃ , NH ₄ OH
Regeneration level	: 120% of operating capacity for NaOH
Regenerant concentration	: 1 to 5%
Regeneration time	: 20-60 minutes
Rinse flow rate: Slow	: At regeneration flow rate
Fast	: At service flow rate.
Rinse Volume	: 15 to 50 gal/ft ³ (2 to 7 M ³ /M ³)

Influent Limitations

Free Chlorine	: Not traceable
Turbidity	: Less than 2 N.T.U
Iron and Heavy metals	: Less than 0.1 ppm



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