THERMAX

TULSION® A-32

'Tough Gel' Strong Base Anion Exchange Resin Type II

TULSION® A-32 is a 'Tough Gel' strong base anion exchange resin based on polystyrene matrix containing quaternary ammonium Type II groups. **TULSION® A-32** has excellent physical characteristics due to its crack-free nature. **TULSION® A-32** has slightly lower basicity than Type I resin and as such shows greater regeneration efficiency and operating capacity at equivalent regeneration levels compared to Type I resins. **TULSION® A-32** is recommended where removal of strong as well as weak acids is necessary at high regeneration efficiencies. However, due to slightly lower basicity, silica leakage is marginally higher compared of Type I anion resin when used in two bed systems along with strong acid cation exchanger TULSION® T-42 in hydrogen form. It is suited for use in a wide range of pH and temperature conditions. The bead surface of **TULSION® A-32** is cracks free and hence it exhibits very high bead trength. **TULSION® A-32** is supplied in chloride form.

TYPICAL CHARACTERISTICS – TULSION® A-32

Type	:	Strong Base Anion Exchange Resin
Matrix structure	:	Polystyrene Copolymer
Functional group	:	Quaternary Ammonium Type II
Physical form	:	Moist spherical beads
Ionic form	:	Chloride
Screen size USS (wet)	:	16 to 50
Particle size (95% minm.)	:	0.3 to 1.2 mm
Total exchange capacity (minm.)	:	1.3 meq/ ml
Swelling (approx.)	:	Cl^- to OH^- 12%
Moisture content	:	47 ± 3%
Maximum temperature stability	:	60° C (140° F)
Backwash settled density	:	43 to 45 lbs/ft^3 (690 to 720 g/l)
pH range	:	0 to 14
Solubility	:	Insoluble in all common solvent

TYPICAL OPERATING CONDITIONS – TULSION® A-32

Maximum operating temperature	:	60° C (140° F)
Resin bed depth (minm.)	:	24" (600 mm)
Maximum service flow	:	60 m^3/hr/m^3
Backwash expansion space	:	50 to 70 %
Backwash expansion flow rate at 25° C (77° F)	:	5 to 10 m^3/hr/m^{2}Regenerant NaOH
Regenerant level	:	40 to 160g NaOH/l
Regenerant concentration	:	4 to 5 % NaOH
Regeneration time	:	30 to 60 mins.
Rinse flow rate : Slow	:	At regenerant flow rate
Fast		At service flow rate
Rinse volume	:	4 to 10 m^3/m^3

HYRAULIC CHARACTERISTICS

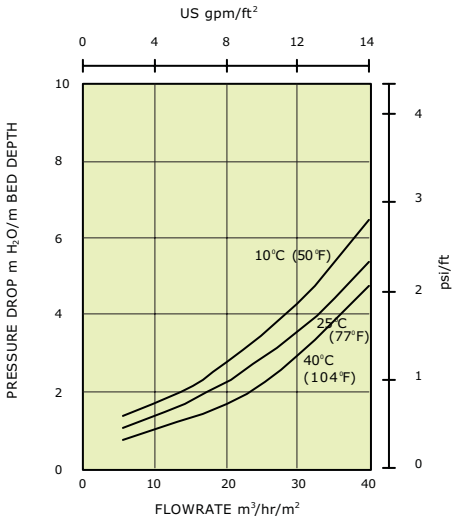

FIG. 1 PRESSURE LOSS

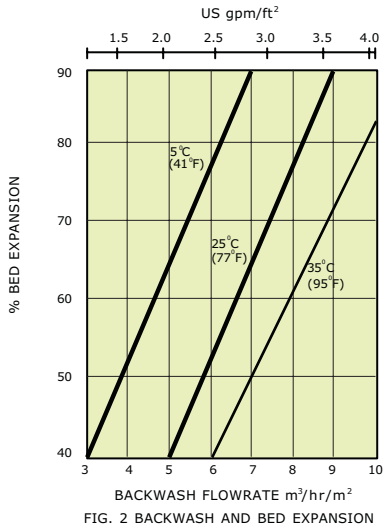

FIG. 2 BACKWASH AND BED EXPANSION

TESTING

The sampling and testing of ion exchange resins is done as per standard testing procedures, namely ASTMD-2187 and IS-7330, 1998.

PACKING

Super sacks	1000 liters
MS drums	180 liters
HDPE lined bags	25 liters

Super sacks	35 cft
Fiber drums	7 cft
HDPE lined bags	1 cft

For Handling, Safety and Storage requirements please refer to the individual Material Safety Data Sheets available at our offices. The data included herein are based on test information obtained by Thermax Limited. These data are believed to be reliable, but do not imply any warranty or performance guarantee. Tolerances for characteristics are as per BIS/ASTM. We recommend that the user should determine the performance of the product by testing on own processing equipment.

For further information, please contact:

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CHEMICAL DIVISION

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TCD/PMG/Oct'07