LENNTECH
WATER TREATMENT SOLUTIONS

THERMAX

TULSION® A-27

STRONG BASE TYPE I ANION EXCHANGE RESIN

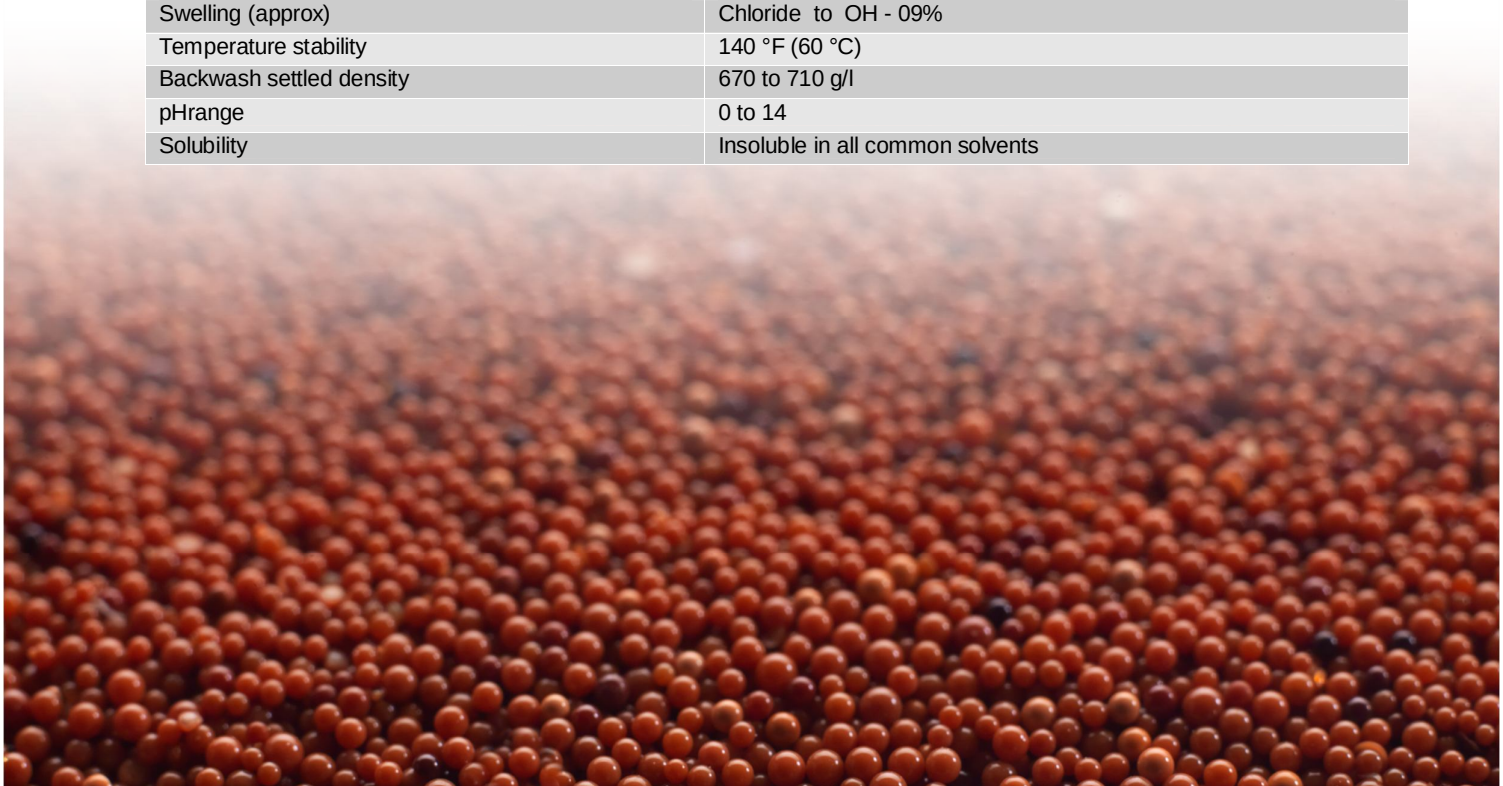
Tulsion® A-27 is a strong base anion exchange resin with an isoporous type structure based on polystyrene matrix, containing quaternary ammonium Type I group. The strong base groups, derived from quaternary ammonium groups, are capable of removing weak acids such as silicic and carbonic acids to very low levels.

Tulsion® A-27 is supplied as moist spherical beads in the chloride form with a controlled particle size distribution to provide excellent kinetics and minimal pressure loss.

Tulsion® A-27 is highly basic. In water treatment, it is employed in a hydroxide form along with the strong acid cation exchanger, Tulsion® T-42 in H^+, both in two bed and mixed bed systems to produce high quality de-ionized water, giving effluent with low silica residuals and low conductivity.

Besides its primary application in water treatment, **Tulsion® A-27** is also commonly used for de-alkalization and other chemical processes. This resin has also better resistance to organic matter.

TYPICAL CHARACTERISTICS	
Type	Strong base anion exchange resin
Matrix structure	Polystyrene copolymer
Functional group	Quaternary amine Type I
Physical form	Moist spherical beads
Ionic form	Chloride
Screen size USS (wet)	16-50
Particle size (95% minimum)	0.3 to 1.2 mm
Uniformity coefficient	1.7 max
Total exchange capacity	1.3 meq/ml min
Moisture content	50 ± 3%
Swelling (approx)	Chloride to OH - 09%
Temperature stability	140 °F (60 °C)
Backwash settled density	670 to 710 g/l
pHrange	0 to 14
Solubility	Insoluble in all common solvents



INFLUENT LIMITATION	
Free chlorine	Not traceable
Turbidity	Less than 2 NTU
Iron and heavy metals	Less than 0.1 ppm

OPERATING CHARACTERISTICS		
Maximum Operating temperature		140 °F (60 °C)
Resin bed depth		24" (600 mm)
Maximum service flow		60 m^3/hr /m^3 of resin
Backwash expansion space		50 – 70 %
Backwash expansion flow rate at 77 °F (25 °C)		5 – 10 m^3/hr/m^2
Regenerant		NaOH
Regeneration level		40 to 160g NaOH/l
Regeneration concentration		4 to 5 %
Regeneration time		30 to 60 minutes
Rinse flow rate	: Slow	At regeneration flow rate
	: Fast	At service flow rate
Rinse volume		4 to 10 m^3/ m^3

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 Sack	1000 lit.	Super Sack	35 cft
MS drums	180 lit.	Fiber Drums	7 cft
HDPE lines Bags	25 lit.	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 date are believed to be reliable, but do not imply any warranty or performance guarantee. Tolerances for characteristics are per BIS/ASTM. We recommend that the user should determine the performance of the product by testing on his own processing equipment.

THERMAX

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