





## MACROPOROUS STRONG BASE TYPE I ANION EXCHANGE RESIN

**Tulsion<sup>®</sup> A-27 MP** is a highly efficient and durable strong base Type-I macroporous anion exchange resin having capacity equivalent to gel type anion resin.

**Tulsion<sup>®</sup> A-27 MP** belongs to the second generation macroporous ion exchange resins which have a distinctly different matrix structure from that of the gel type and conventional macroporous resins.

**Tulsion<sup>®</sup> A-27 MP** has a controlled pore structure which provides high operating capacity when used in demineralization of water along with strong acid cation exchanger in hydrogen form in two bed or mixed bed units.

**Tulsion<sup>®</sup> A-27 MP** is capable of reducing both strong and weak acids to very low levels. It is ideally suited for use in a wide range of pH and temperature conditions. It is supplied in chloride form. This resin has also better resistance to organic matter.

TYPICAL CHARACTERISTICS				
Туре	Macroporous 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	1.2 meq/ml min			
Moisture content	58 ± 3%			
Swelling (approx)	Chloride to OH: 09%			
Temperature stability	175 °F (80 °C)			
Backwash settled density	670 to 710 g/l			
pHrange	0 to 14			
Solubility	Insoluble in all common solvents			

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

OPERATING CHARACTERISTICS				
Maximum Operating temperature	175 °F (80 °C)			
Resin bed depth	24" (600 mm )			
Maximum service flow	7.5 gpm/ft <sup>3</sup> (60 m <sup>3</sup> /hr /m <sup>3</sup> )			
Backwash expansion space	50 – 70 %			
Backwash expansion flow rate at 77 °F (25 °C)	$5 - 10 \text{ m}^3/\text{hr/m}^2$			
Regenerant	NaOH			
Regeneration level	2.5 to 10 lbs NaOH/ft <sup>3</sup> (40 to 160g NaOH/l)			
Regeneration concentration	4 to 8 %			
Regeneration time	15 to 60 minutes			
Rinse flow rate : Slow	At regeneration flow rate			
: Fast	At service flow rate			
Rinse volume	4 to 10 m <sup>3</sup> / m <sup>3</sup>			

## **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 Limited

LENNTECH info@lenntech.com Tel. +31-152-610-900 www.lenntech.com Fax. +31-152-616-289