



## **101.510N**® A-23 SM

## TOUGH GEL STRONG BASE ANION EXCHANGE RESIN TYPE I

**TULSION®** A-23 **SM** is a strong base anion exchange resin based on polystyrene matrix, containing quaternary ammonium Type I group.

**TULSION® A-23 SM** has excellent chemical and operating characteristics along with excellent physical properties due to its crack-free nature.

**TULSION**<sup>®</sup> **A-23 SM** has a good operating capacity for weak acids like silicic and carbonic along with strong mineral acids, when used in water treatment along with strong acid cation exchange resin **TULSION**<sup>®</sup> **T-42 SM**. It is ideally suited for use in a wide range of pH and temperatures.

**TULSION**<sup>®</sup> **A-23 SM** is supplied as moist spherical bead in the chloride form with a particle size distribution to provide good kinetics and minimum pressure drop.

The bed surface of **TULSION® A-23 SM** is crack free & hence it exhibits very high bead strength. This resin has also better resistance to organic matter.

TYPICAL CHARACTERISTICS				
Туре	Gel type strong base anion exchange resin			
Matrix structure	Polystyrene copolymer			
Functional group	Quaternary amine			
Physical form	Moist spherical beads			
lonic form	Chloride			
Screen size USS (wet)	16-40			
Particle size	0.4 to 1.2 mm			
Uniformity coefficient	1.5 max			
Total exchange capacity	1.3 meq/ml min			
Moisture content	53 ± 3%			
Temperature stability	175 °F (80 °C)			
Backwash settled density	40 to 42 lbs/ft (640 to 680 g/l)			
pH range	0 to 9			
Solubility	Insoluble in all common solvents			



OPERATING CHARACTERISTICS				
Maximum Operating temperature		175 °F (80 °C)		
Resin bed depth		24" (600 mm )		
Maximum service flow		40 m <sup>3</sup> /hr /m		
Backwash expansion space		50 – 70 %		
Backwash expansion flow rate at 77 °F (25 °C)		4 – 6 m <sup>3</sup> /hr/m <sup>2</sup>		
Regenerant		NaOH		
Regeneration concentration		4 to 5 %		
Regeneration time		20 to 60 minutes		
Rinse flow rate	: Slow	At regeneration flow rate		
	: Fast	At service flow rate		
Rinse volume		2 to 7 BV		

## **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.

