

# TULSION® T-52 Na N

## PREMIUM STRONG ACID CATION NUCLEAR GRADE RESIN

**TULSION®T- 52 Na N** is a gel type, containing Sulphonic acid as functional group, having excellent resistant to oxidizing agents with high operating capacity.

**TULSION®T-52 Na N** is produced as moist spherical beads, containing nuclear Sulphonic acid groups, having excellent physical and chemical characteristics.

**TULSION®T- 52 Na N** this product is most suitable for water treatment and it is suited for use in a wide range of pH and elevated temperature conditions.

**TULSION® T-52 Na N** is NSF grade resin, conditioned during manufacturing to achieve low VOCs as per NSF standard. However it is recommended to follow preconditioning of the resin before use as shown below.

### TYPICAL CHARACTERISTICS - TULSION® T-52 Na N

Type	: Strong acid cation exchange resin
Matrix structure	: Crosslinked copolymer
Functional group	: Sulphonic
Physical form	: Amber colored moist beads
Ionic form	: Sodium
Screen size USS (wet)	: 16 to 50
Particle size (minm. 95%)	: 0.3 to 1.2 mm
Total exchange capacity (meq / ml )	: 2.1 min.
Moisture %	: 43 + 3%
Backwash settled density, g/lit	: 830 to 860
Temperature stability (max)	: 140 ° C
pH range	: 0 to 14
Solubility	: Insoluble in all common solvent.



## TYPICAL OPERATING CONDITIONS – TULSION® T-52 Na N

Maximum operating temperature	: 140°C in Na form
Resin bed depth (min)	: 600 mm
Maximum service flow	: 120 m <sup>3</sup> /hr/m <sup>3</sup>
Backwash expansion space	: 40 to 75%
Backwash flow	: 9 to 20 m <sup>3</sup> /hr/m <sup>3</sup>
Regenerant	: HCl/ H <sub>2</sub> SO <sub>4</sub> for H form; NaCl for Na form
Regeneration level	: 30 to 160 g HCl/l; 40 to 250g/l H <sub>2</sub> SO <sub>4</sub> ; 60 to 160 NaCl g/l
Regenerant concentration	: 3 to 4% HCl; 1.5 to 5% H <sub>2</sub> SO <sub>4</sub> ; 10 to 15% NaCl
Regenerant flow rate	: 2 to 16 m <sup>3</sup> /hr/m <sup>3</sup>
Regeneration time	: 20 to 60 min.
Rinse flow rate: Slow	: At regeneration flow rate
: Fast	: At service flow rate
Rinse Volume	: 3 to 5 m <sup>3</sup> /m <sup>3</sup>

## TESTING

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

## PACKING

Super Sack	1000 lit	Super Sack	35 cft
MS drums	180 lit.	Fiber Drums	7 cft
HDPE lined 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 data 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.



## PRECONDITIONING OF RESIN

- 1) Load resin in the column and carry out back wash with process water to expand resin bed at least 50%-60% for 10 minutes. Allow resin to settle and drain water from the column up to resin bed level.
- 2) Fill resin column with 2 BV DI water and soak it for minimum 12 hrs
- 3) Drain water up to resin bed level.
- 4) Carry out brine regeneration using 8 lb/cft NaCl as 6% solution at 2 BV/hr flow rate. Rinse with DM water until effluent is chloride free.
- 5) Proceed with NSF testing.

For further information, please contact: [resins@thermaxindia.com](mailto:resins@thermaxindia.com)



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In view of our constant endeavor to improve the quality of our products, we reserve the right to change their specifications without prior notice.