

TULSION® T-53 Na

Strong Acid Cation Exchange Resin

TULSION® T-53 Na is a gel type, strong acid cation exchange resin, having excellent resistance to oxidizing agents with high operating capacity.

TULSION® T-53 Na is supplied in moist spherical beads in hydrogen form, with excellent physical and chemical characteristics, with minimum impurities to meet nuclear industry specification.

TULSION® T-53 H form can be used with **TULSION® A-23** used in mixed bed units in water treatment nuclear industry, which requires high effluent purity, operating capacity and resin life.

TULSION® T-53 Na is specifically designed for better exchange kinetics and resistance to separation from anion exchange resin, when used as mixed bed resin.

TYPICAL CHARACTERISTICS OF TULSION® T- 53 Na

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|--------------------------------------|-------------------------------------|
| Type | : Strong Acid Cation exchange resin |
| Matrix structure | : Styrene divinyl benzene copolymer |
| Functional group | : Sulphonic group |
| Physical form | : Dark amber colored moist beads |
| Ionic form | : Sodium |
| Particle size distribution mm (95%) | : 0.3 to 1.2 mm |
| Fines content % (< 0.3 mm) | : 1 % max. |
| Coarse bead % (>1.2 mm) | : 2 % max. |
| Uniform Coefficient | : 1.45 max |
| Total Exchange Capacity (minimum) | : 2.2 meq/ml |
| Moisture content | : 45 ± 3 % |
| Backwash settled density | : 830 to 860 g/l |
| Suitable pH range | : 0 to 14 |
| Temperature stability | : 120 ° C |
| Solubility | : Insoluble in all common solvents. |



TYPICAL OPERATING CHARACTERISTICS OF TULSION® T-53 Na

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| Maximum operating temperature | : 120°C |
| Resin bed depth | : 800 mm |
| Maximum service flow | : 120 m ³ /hr/m ² . |
| Backwash flow rate (for 40 to 75% Expansion) | : 9 to 20 m ³ /hr/m ² . |
| Regenerant | : HCl & H ₂ SO ₄ . |
| Regeneration level | : 30 to 160 g/l HCl & 40 to 150 g/l H ₂ SO ₄ |
| Regenerant Concentration | : HCl (3 to 5%) & H ₂ SO ₄ (1.5 to 4%) |
| Regeneration flow rate | : 2 to 16 m ³ /hr/m ³ |
| Regeneration Contact Time | : 20 to 60 mins. |
| Rinse flow rate | : Slow At regeneration flow rate minimum 2 BV |
| Fast Rinse | : At Service flow rate |
| Rinse volume | : 3 to 5 m ³ /m ³ |

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

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|-----------------|----------|-----------------|--------|
| 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 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.

For further information, please contact: 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.

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