

## **TULSION<sup>®</sup> T-42 H**

### **STRONG ACID CATION EXCHANGE RESIN – HYDROGEN FORM**

**Tulsion<sup>®</sup> T-42 H** is a premium quality strong acid cation exchange resin containing nuclear sulphonic acid groups having high exchange capacity combined with excellent physical and chemical stability and operating characteristics. It is ideally suited for use in wide range of pH and temperature conditions.

**Tulsion<sup>®</sup> T- 42H** is supplied in hydrogen form for two stages and mixed bed demineralization and in sodium form for softening.

**Tulsion<sup>®</sup> T- 42 H** is also used for de-alkalization and chemical processing.

#### **TYPICAL CHARACTERISTICS**

|                          |                                   |
|--------------------------|-----------------------------------|
| Type                     | Strong acid cation exchange resin |
| Matrix structure         | Polystyrene Copolymer             |
| Functional group         | Nuclear sulphonic                 |
| Physical form            | Moist Spherical Beads             |
| Ionic form               | Hydrogen                          |
| Screen Size USS (wet)    | 16 to 50                          |
| Particle size (95% min)  | 0.3 to 1.2 mm                     |
| Total Exchange Capacity  | 1.8 meq/ ml (min).                |
| Moisture content         | 52 ± 3%                           |
| Swelling (approx)        | Sodium to Hydrogen : 7%           |
| pH range                 | 0 to 14                           |
| Solubility               | Insoluble in all common solvents  |
| Backwash settled density | 830 to 840 g / l                  |



| CHARACTERISTICS                         |                                                       |
|-----------------------------------------|-------------------------------------------------------|
| Maximum operating temperature           | 120°C in H form                                       |
| Resin bed depth (minimum)               | 800 mm                                                |
| Maximum service flow                    | 120 m <sup>3</sup> /hr/m <sup>3</sup>                 |
| Backwash expansion space                | 40 – 75%                                              |
| Backwash flow rate for 40-70% expansion | 9 – 25 m <sup>3</sup> /hr/m <sup>3</sup>              |
| Regenerant                              | HCl / H <sub>2</sub> SO <sub>4</sub>                  |
| Regeneration level                      | 30 to 160 g/l                                         |
| Regenerant concentration                | 3 to 4% HCl; 1.5 to 5% H <sub>2</sub> SO <sub>4</sub> |
| 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 – 5 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 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.



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