

MATERIAL SAFETY DATA SHEET

1. CHEMICAL IDENTITY

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|--|--------------------------|--|------------------------------|
| Chemical Name / Synonyms : Strong Acid Cation Exchange Resin | | Chemical Classification : Non-Hazardous | |
| | | Trade Name : Tulsion T42 H | |
| Formula : N. A. | C.A.S. No. : N.A. | U. N. No. : N. A. | Ionic Form : Hydrogen |
| Regulated Identification | | Shipping Name : N.A. | Hazchem No. : N. A. |
| | | Hazardous waste I. D. No. : N. A. | |
| Hazardous Ingredients* | | C.A.S. No. | Amount % |
| 1. Styrene – DVB copolymer with Sulfonic acid groups. | | | 49 – 55 |
| 2. Water | | 7732 – 18 – 5 | 45 – 51 |
| | | | |
| | | | NE = None Established |

* As defined in 29 CFR 1910.1200

2. PHYSICAL AND CHEMICAL DATA

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| Physical State : Solid | Vapour Density (Air = 1) : N. A. |
| Appearance : Spherical beads | Vapour pressure @ 35 °C, mm Hg : N. A. |
| Boiling Point : N. A. | Solubility in water @ 30°C : Insoluble |
| Melting Point : N. A. | Specific Gravity (H₂O = 1) : 1.2 to 1.3 |
| Freezing Point : N. A. | Evaporation Rate (B. A. = 1) : N. A. |
| Odour : Odourless | % Volatiles : 45 – 51 |
| pH : 6 – 8 | |

3. FIRE AND EXPLOSION HAZARD DATA

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| Flammability No | LEL % N. A. | Flash Point ° C N. A. | Auto – ignition temp. 427 °C / 800 Deg. F |
| TGD Flammability N. A. | UEL % N. A. | Flash Point ° C N. A. | (Hazardous) combustion products |
| Explosion Sensitivity to impact : Nil | | | |
| Explosion Sensitivity to Static Electricity : Nil | | | |
| Hazardous Polymerisation : Will not occur | | | |
| Combustible Liquid : N. A. | Explosive Material : N. A. | Corrosive Material : N. A. | |
| Flammable Material : N. A. | Oxidiser : N. A. | Others : N. A. | |
| Pyrophoric Material : N. A. | Organic Peroxide : N. A. | | |

4. REACTIVITY DATA

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| Chemical Stability | : Chemically stable. Avoid temperatures above 220° C / 428 Deg. F |
| Incompatibility with other material | : Avoid strong oxidising agents such as Nitric acid. |
| Reactivity | : N. A. |
| Hazardous reaction products | : N. A. |

5. HEALTH HAZARD DATA

| Routes of Entry | Effects of Exposure / Symptoms | Emergency Treatment | | |
|---|--|--|---------------------------------------|-------------------------|
| Eye | Solid or Dust may cause irritation or Corneal injury due to mechanical action. | Wash thoroughly with water | | |
| Skin Contact | Prolonged or repeated exposure not likely to cause any significant skin irritation | N. A. | | |
| Skin Absorption | Skin absorption is unlikely due to physical properties. | N. A. | | |
| Inhalation | Vapours are unlikely due to physical properties. | N. A. | | |
| Ingestion | Single dose Oral LD ₅₀ has not been determined. Single dose Oral toxicity is believed to be low. No hazardous anticipated from ingestion incidental to industrial exposure. | | | |
| Systemic and other effects | No specific data available. However repeated exposure is not anticipated to cause any significant adverse effects. | | | |
| TLV (ACGIH) | : N. A. | STEL : N. A. | | |
| Permissible Exposure Limit LD₅₀ | : N. A. | Odour Threshold LD₅₀ : N. A. | | |
| NFPA Hazard Signals : | Health N. A. | Flammability Non flammable | Stability Chemically stable | Special N. A. |

6. PREVENTIVE MEASURES

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| Personnel Protective Equipment | : |
| Face mask , Impervious gloves , Splash goggles , Eye washer | |
| Handling and Storage Precautions | : |
| Store in a cool enclosed place. Avoid repeated freeze – thaw cycles. | |

7. EMERGENCY AND FIRST AID MEASURE

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|-----------------|-----------------------------------|--|
| FIRE | Fire Extinguishing Media : | Dry Chemical , CO ₂ , Water fog |
| | Special Procedures : | Wear MSHA / NIOSH approved , pressure demand self contained breathing apparatus / equipment. |
| | Unusual Hazards : | N. A. |
| EXPOSURE | First Aid Measures : | N. A. |
| | Antidotes / Dosages : | N. A. |
| SPILLS | Steps to be taken : | Sweep up immediately. |
| | Waste Disposal Method : | <ol style="list-style-type: none"> 1. Landfill / Incineration 2. New material may be disposed off as ordinary trash. 3. Used material which has been contaminated with heavy metals or radioactive metals or toxic substances must be treated as per local state and federal regulations. |

8. ADDITIONAL INFORMATION

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| Do not pack column with dry resin. Dry beads expand when wetted , which may cause glass column to shatter. |
| Strong oxidising agents such as Nitric acid can cause explosive reactions. Nitric acid regeneration should be carried out by experienced personnel only. |

9. MANUFACTURER / SUPPLIERS DATA

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| Thermax Limited , Chemical Division , Village Paudh , Post Majgaon , Taluka Khalapur , Dist. Raigad 410206 , India Phone : 011/91/020/7120181/7120169 Fax : 011/91/020/7120206 | Contact Person In Emergency : Factory Manager |
| | Local Bodies involved : N. A. |
| | Standard Packing : As per mentioned in literature leaflet |
| | Tremcard Details / Ref. N. A. |
| | Others : N. A. |

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