

MATERIAL SAFETY DATA SHEET

Manufacturing Location: Thermax Limited		Date Issued/Revised: 23-Jan-03	
Address: 97 E. Bhosari Industrial Area, Bhosari Pune 411 026 India		Prepared by: K. Deshpande Phone: 011/91/20/7120169	
I. PRODUCT			
Trade Name: TULSION T-42 Na		Form: Sodium Form	
Formula: Not Applicable		Chemical Name or Synonyms: Strong Acid Cation Resin	
II. HAZARDOUS INGREDIENTS*			
Description	Cas. No.	Amt. (%)	TWA/TLV
Sulphonated Divinylbenzene/Stryene Copolymer	63182-08-1	52-57	NE NE
Water	7732-18-5	43-48	NE=None Established
III. PHYSICAL DATA			
Boiling Point 100° C (Water)		Specific Gravity (H2O=1) 1.2 - 1.3	
Vapor Pressure (mm.Hg) 17 @ 20 C/68 F		% Volatile 43-48	
Vapor Density (air = 1) Less than 1		Evaporation Rate (B.A.=1) Less than 1 (water)	
Solubility in Water Negligible		Appearance, Odor, pH, etc. Beads, pH 5-9	
IV. FIRE AND EXPLOSION HAZARD DATA			
Flash Point (° C) N.A.	Flammable X	Combustible ---	Non-Flammable ---
Flammable Limits	LEL N.A.	UEL N.A.	
Extinguishing Media: Dry Chemical, CO2, Water Fog		Ignition: 500°C/932°F (est)	
Special Fire Fighting Procedures: Wear MSHA/NIOSH approved, pressure-demand self-contained breathing apparatus or equivalent.			
Unusual Fire and EXPLOSION Hazards: Toxic decomposition products.			
V. REACTIVITY DATA			
STABILITY		CONDITIONS TO AVOID	
Stable	X	Temperatures above 200° C/392° F	
Unstable	---		
INCOMPATIBILITY (MATERIALS TO AVOID) : Avoid strong oxidizing agents such as Nitric Acid.			
Hazardous Decomposition Products: Styrene Monomer, Divinylbenzene, Sulphuric Acid			
HAZARDOUS POLYMERIZATION		CONDITIONS TO AVOID	
May Occur	---	None known	
Will Not Occur	X		

* As defined in 29 CFR 1910.1200

VI. HEALTH HAZARD DATA	
<p>EYE: Solid or dust may cause irritation or corneal injury due to mechanical action</p> <p>SKIN CONTACT: Prolonged or repeated exposure not likely to cause significant skin irritation.</p> <p>SKIN ABSORPTION: Skin absorption is unlikely due to physical properties.</p> <p>INGESTION: Single dose oral LD50 has not been determined. Single dose oral toxicity is believed to be low. No hazards anticipated from ingestion incidental to industrial exposure.</p> <p>INHALATION: Vapors are unlikely due to physical properties.</p> <p>SYSTEMIC & OTHER EFFECTS: No specific data available, however, repeated exposures are not anticipated to cause any significant adverse effects.</p>	
VII. DISPOSAL METHODS	
<p>WASTE DISPOSAL METHODS</p> <ul style="list-style-type: none"> - New material may be disposed of as ordinary trash. - Used material which have been contaminated with heavy metals or toxic substances must be treated as such. - Disposal must be made in accordance with all local, state and federal regulations. 	
VIII. SPECIAL PROTECTION INFORMATION	
<p>VENTILATION TYPE</p> <p style="padding-left: 40px;">Normal room ventilation.</p>	
<p>RESPIRATORY PROTECTION</p> <p style="padding-left: 40px;">None required for normal operation.</p>	
<p>PROTECTIVE GLOVES</p> <p style="padding-left: 40px;">Impervious gloves.</p>	<p>EYE PROTECTION</p> <p style="padding-left: 40px;">Splash goggles (ANSI Z87.1)</p>
<p>OTHER PERSONAL PROTECTIVE EQUIPMENT</p> <p style="padding-left: 40px;">Local eyewash facility.</p>	
IX. SPECIAL PRECATIONS	
<p>STORAGE AND HANDLING</p> <ul style="list-style-type: none"> - Store at ambient temperature (max. 60° C/140° F; min. 0° C/32°F) - Avoid repeated freeze-thaw cycles. 	
<p>OTHER</p> <ul style="list-style-type: none"> - Avoid leaving resin open to atmosphere to prevent absorption of moisture by resin - In case of spillage, floor may be slippery. Sweep up immediately. 	
X. MISCELLANEOUS INFORMATION	CAUTION
<ul style="list-style-type: none"> - Do not pack column with dry resin. Dry beads expand when wetted which may cause a glass column to shatter. - Strong oxidizing agents such as Nitric Acid can cause explosive reactions. - Nitric Acid regeneration should be carried out by experienced personnel only. 	

The data and recommendations presented herein are based upon our research and the research of others, and are believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of these data or results to be obtained from the use thereof.

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