

MATERIAL SAFETY DATA SHEET

1. Chemical Product & Company Identification

Brand Name & Code	Tulsion A-23 Cl	
Validation Date & REV No.	01-04-2021	Rev. No. 002
Company Identification	M/s. Thermax Limited, Chemical Division, 97-E, General Block, MIDC Industrial Area, Bhosari, Pune 411 026 [India]	
24 hour emergency assistance	00 91 20 66128200, 00 91 20 66128100, 00 91 20 66128202	
Fax	00 91 20 27120206	

2. Composition / Information on ingredients

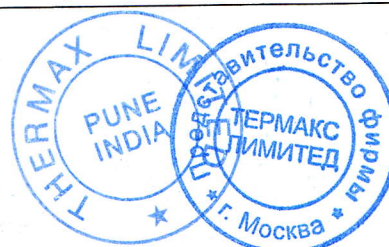
Component	CAS	% by Wt.	Exposure guidelines
Styrene-DVB copolymer with quaternary ammonium functional group in chloride form	69011-19-4	44 - 50	None established
Water	7732-18-5	50 - 56	None established

3. Hazards Identification

Potential Health Effects	
Skin	Prolonged or repeated exposure not likely to cause any significant skin irritation. Skin adsorption is unlikely due to physical properties.
Eyes	Solid or dust may cause irritation corneal injury due to mechanical action.
Inhalation	Vapors are unlikely due to physical properties. No adverse effects are anticipated from inhalation.
Ingestion	Single dose oral LD ₅₀ has not been determined. Single dose oral toxicity is believed to be very low. No hazardous anticipated from ingestion incidental to industrial exposure.
Physical / Chemical Effects	
These effects have not been studied thoroughly.	

4. First Aid Measures

Skin	Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.
Eyes	Flush eyes thoroughly with water for at least 15 minutes occasionally lifting upper and lower eyelids. Get medical aid from preferably an ophthalmologist.
Inhalation	If inhaled remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.
Ingestion	If swallowed, wash out mouth with water provided person is conscious. Call a physician.



5. Fire fighting Measures

Flash point	N / A
Auto ignition temperature	427 Deg. C [800 Deg. F]
LEL	N / A
UEL	N / A
Fire Extinguishing Media	Water spray, Carbon dioxide, Dry chemical powder or appropriate foam.
Basic Fire fighting Procedure	Keep people away. Isolate fire area and deny unnecessary entry. Cool surroundings with water to localize fire zone. Wear MSHA / NIOSH approved, pressure demand self contained breathing apparatus / equipment.
Unusual Fire & Explosion Hazards	Emits toxic fumes under fire conditions.

6. Accidental Release Measures

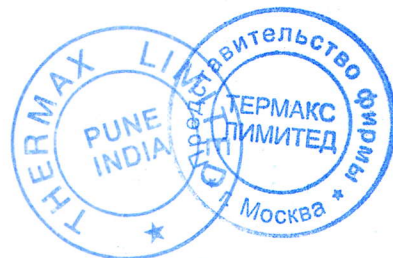
Personnel precautions	Spilled material may cause a slipping hazard. Use appropriate safety equipment as indicated in point no. 8, Exposure controls / personnel protection.
Environmental precautions	Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See point no. 12, Ecological information.

7. Handling and Storage

Handling precautions	Avoid contact with skin / eyes. Avoid prolonged or repeated exposure. Wash thoroughly after handling.
Storage conditions	Store in a cool enclosed place. Avoid repeated freeze - thaw cycles.

8. Exposure controls / Personnel protection

Eye protection	Use safety eyeglasses or chemical safety goggles as described by OSHA's eye & face protection regulations in 29 CFR 1910.133 or European standard EN 166.
Skin & body protection	Wear appropriate gloves and clean body covering clothing to prevent skin exposure.
Respiratory protection	No respiratory protection is needed but whenever necessary always use a NIOSH or European standard EN 149 approved respirator when necessary.



9. Physical and chemical properties

Physical state	Solid
Appearance	Pale yellow-colored spherical beads
Odor	
Boiling point	N / A
Melting point	N / A
Freezing point	N / A
Vapor density [Air = 1]	N / A
Vapor pressure @ 20° C	N / A
Solubility in water @ 30° C	Insoluble
Specific gravity [H ₂ O = 1]	1.05 to 1.15
Evaporation rate [B. A. = 1]	N / A
% Volatiles	50 - 56

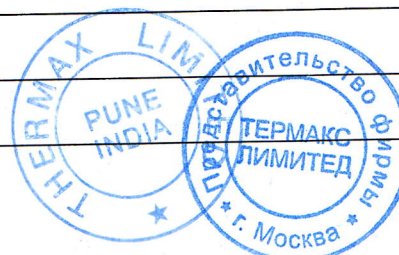
10. Stability and reactivity

Stability / incompatibility	Stable under recommended storage conditions, see point no. 7, Storage conditions. Product can decompose at elevated temperatures, so avoid temperatures above 220° C / 428° F.
Materials to avoid	Avoid contact with strong oxidizing agents such as Nitric acid. Before using strong oxidizing agents consult sources knowledgeable in handling such materials. The severity of the reaction with oxidizing materials can vary from slight degradation to an explosive reaction.
Hazardous decomposition products	Hazardous decomposition products depend upon temperature, air supply and the presence of other materials. Hazardous decomposition products may include and not limited to Carbon monoxide, Carbon dioxide, aromatic compounds, Hydrocarbons, Organic sulfonates and sulfur oxides. Hazardous polymerization will not occur.

11. Toxicological information

No data available for this material. The information shown below is based on profiles of compositionally similar materials.	
Acute	No relevant information found.
Skin	Data not available for this material. Acute dermal toxicity value for LD ₅₀ rabbit > 2000 mg / Kg based on data for similar compositions.
Eye	No relevant information found.
Ingestion	Data not available for this material. Acute oral toxicity value LD ₅₀ rat > 5000 mg / Kg based on data for similar compositions.

TSCA	
TSCA section 4(a) Final test rules & testing consent orders	Not Regulated
TSCA section 5(a) (2) Final significant new use rules (SNURs) (40 CFR 721, Subpt. E)	Not Regulated
TSCA section 5(e) PMN – Substance consent orders	Not Regulated
TSCA section 12(b) Export Notification (40 CFR-707, Subpt. D)	Not Regulated



12. Ecological information

Ecotoxicity & bioaccumulation	Ecotoxicity is not expected to be acutely toxic, but pellets may mechanically cause adverse effects if ingested by waterfowl or aquatic life. No bioconcentration of polymeric component is expected because of it's high molecular weight.
Environmental mobility	In the terrestrial environment, material is expected to remain in the soil. In the aquatic environment, material will sink and remain in the sediment.
Environmental degradability	Based largely / completely on information for copolymer. Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

13. Disposal considerations

For used / uncontaminated product, the preferred options include incineration, landfill etc.
 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.
 THE THERMAX LTD, CHEMICAL DIVISION HAS NO CONTROL, OVER THE MANAGEMENT PRACTISES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN IT'S INTENDED CONDITION AS DISCRIBED IN POINT NO. 2 OF THIS MSDS.

14. Transport information

Hazard Label	Non hazardous
ADR	Non hazardous for Road transport
IMDG	Non hazardous for Sea transport
IATA	Non hazardous for Air transport

15. Regulatory information

The information shown below is based on profiles of compositionally similar materials.	
Hazard category	Indication of danger – Xi – Irritant
Risk Phrase	36, Irritating to eyes.
Safety Phrase	26 – 36, In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

16. Other information

If the material gets dried, while rewetting, resin gets swelled.

Disclaimer:

This information relates specifically to the product designated and may not be valid for the product when used in combination with any other materials or products or in a particular process. The information is, to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to it's accuracy, reliability or completeness. It is the user's responsibility to review this information, satisfy itself as to it's suitability and completeness and pass on the information to it's employees or customers in accordance with applicable federal, state or local hazard communications requirement. We do not accept responsibility for any loss or damage which may occur from the use of this information. Brand name is trade mark of Thermax limited, Chemical Division, Pune, India.

