



## MATERIAL SAFETY DATA SHEET

### 1. Chemical Product & Company Identification

Trade Name	Tulsion
Brand Name & Code	A - 2X MP
Validation Date	15/03/2007
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 27120181, 00 91 20 271 20169
Fax	00 91 20 27120206

### 2. Composition / Information on ingredients

Component	CAS	% by Wt.	Exposure guidelines
Tertiary amine functionalized styrene DVB copolymer	069011-17-2	50-55	None established
Water	007732-18-5	45- 50	

### 3. Hazards Identification

Potential Health Effects	
Skin	Prolonged or repeated exposure not likely to cause any significant skin irritation.
Eyes	Solid or dust may cause irritation corneal injury due to mechanical action.
Inhalation	Material may be irritating to mucous membranes and upper respiratory track. May be harmful if inhaled.
Ingestion	May be harmful if swallowed.
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.



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### 5. Fire fighting Measures

Flash point	N / A
Auto ignition temperature	Data not available.
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	Not known.

### 6. Accidental Release Measures

Personnel precautions	Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.
Environmental precautions	Material is insoluble in water & will settle at the bottom since it is heavier than water.

### 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
pH	Not applicable
Odor	Characteristic, fishy smell
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 <sub>2</sub> O = 1 ]	1. to 1.15
Evaporation rate [ B. A. = 1 ]	N / A

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Water content	45 - 50 %
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### 10. Stability and reactivity

Stability / incompatibility	Stable under recommended storage conditions.
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 <sub>50</sub> 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 <sub>50</sub> rat > 5000 mg / Kg based on data for similar compositions.

### 12. Ecological information

Ecotoxicity & bioaccumulation	No bioaccumulation is expected of polymeric material. In aquatic media material will sink & remain in the bottom. Not expected to be acutely toxic but pellets may cause harmful effects if swallowed by aquatic life
Environmental mobility	No information found
Environmental degradability	Not expected to be biodegradable. Surface degradation due to sunlight may be possible.

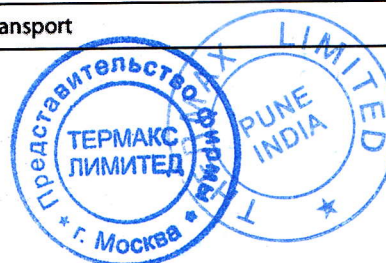
### 13. Disposal considerations

Contact a licensed professional waste disposal services to dispose of this material. Dissolve or material to with a combustible solvent and burn in chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state and local environmental regulations.

### 14. Transport information

Hazard Label	Non hazardous
ADR	Non hazardous for Road transport
IMDG	Non hazardous for Sea transport
IMDG Packing group	MFAG No:
IATA	Non hazardous for Air transport

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### 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.

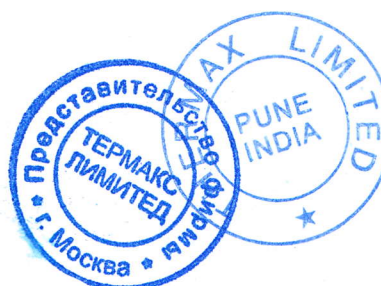
### 16. Other information

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 its accuracy, reliability or completeness. It is the user's responsibility to review this information, satisfy itself as to its suitability and completeness and pass on the information to its 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.

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