

1 Identification

- **Trade name:** Tulsion MB 11 G
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture**
Industrial water softening, demineralization, Ultrapure water production, Condensate polishing
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
M/s. Thermax Limited, Chemical Division,
97-E, General Block, MIDC Industrial Area,
Bhosari, Pune 411 026
India
- **Information department:**
Tel: 91-20-66128100/66128226/66128224
Off. No.: +91 -20-66128100/200
Fax No. 020-27120206
- **Emergency telephone number:** +91 20-66128100/200
24 hour emergency assistance: 00 91-20-66128100/200

2 Hazard(s) identification

- **Classification of the substance or mixture**



Eye Irrit. 2A H319 Causes serious eye irritation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Risk of serious damage to eyes.

- **Information concerning particular hazards for human and environment:**
The product has to be labeled due to the calculation procedure of international guidelines.
- **Classification system:**
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

- **Label elements**

- **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with directives on hazardous materials.
- **Code letter and hazard designation of product:**



- **Risk phrases:**
Risk of serious damage to eyes.
- **Safety phrases:**
Keep out of the reach of children.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Wear eye/face protection.

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*If swallowed, seek medical advice immediately and show this container or label.
 Dispose of this material and its container to hazardous or special waste collection point.*

- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 2
 Fire = 0
 Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 2
 Fire = 0
 Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization:** *Mixtures*
- **Description:** *Mixture of the substances listed below with nonhazardous additions.*

· **Dangerous components:**

69011-20-7 & 69011-18-3	Mixture of Strong acid cation exchange resin and Strong base anion exchange resin, Type I	40 – 50
7732 – 18 – 5	Water	50 – 60

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
- **After skin contact:**
*Wash affected skin with soap and water.
 If skin irritation continues, consult a doctor.*
- **After eye contact:** *Flush eyes with plenty of water for at least 15 minutes. If irritation develops consult doctor.*
- **After swallowing:**
*Do not induce vomiting.
 Seek immediate medical advice.*
- **Most important symptoms and effects, both acute and delayed** *No further relevant information available.*
- **Information for doctor:** *Treat symptomatically.*

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- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Nitrogen oxides (NO_x)
Hydrogen chloride (HCl)
Carbon oxides
- **Advice for firefighters**
Wear suitable protective clothing to avoid contact with skin.
Wear self-contained respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Avoid formation of dust.
- **Environmental precautions:** *Do not allow to enter sewers/ surface or ground water.*
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.
Prevent formation of aerosols.
Avoid contact with eyes and skin.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store in a cool, dry, well-ventilated area away from incompatible substances.
- **Information about storage in one common storage facility:** *Store away from oxidizing agents.*
- **Further information about storage conditions:** *Store in original containers.*
- **Specific end use(s)** *No further relevant information available.*

8 Exposure controls/personal protection

- **Additional information about design of technical systems:**
Use adequate ventilation to keep airborne concentrations low.

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- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
*Immediately remove all soiled and contaminated clothing.
 Wash hands before breaks and at the end of work.
 Avoid contact with the eyes.*
- **Breathing equipment:** *Filter A/P2*
- **Protection of hands:**



Protective gloves

- **Material of gloves**
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

- **Body protection:** *Protective work clothing*

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	<i>Solid</i>
Color:	<i>Yellow colored spherical beads</i>
Odor:	<i>Amine Like</i>
- **pH-value:** *6-9*
- **Change in condition**

Melting point/Melting range:	<i>-</i>
Boiling point/Boiling range:	<i>Not applicable.</i>
- **Flash point:** *58.8 °C (138 °F)*
- **Ignition temperature:**
- **Decomposition temperature:** *Not determined.*
- **Auto igniting:** *The product does not show self ignition.*

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· Danger of explosion:	<i>Product does not present an explosion hazard.</i>
· Vapor pressure at 25 °C (77 °F):	<i>0.874 mmHg</i>
· Density:	<i>Not determined.</i>
· Evaporation rate	<i>Not applicable.</i>
· Solubility in / Miscibility with Water:	<i>Insoluble.</i>
· Partition coefficient (n-octanol/water):	<i>Not determined.</i>
· Solvent content:	
Organic solvents:	<i>0.0 %</i>
Solids content:	<i>40-50</i>
· Other information	<i>Specific gravity [H₂O = 1] = 1.1 to 1.2</i>
% Volatiles = 50 – 60	

10 Stability and reactivity

- **Reactivity**
- **Chemical stability** *Stable at ambient temperature and under normal conditions of use.*
- **Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.*
- **Possibility of hazardous reactions** *No dangerous reactions known.*
- **Conditions to avoid** *Avoid formation of dust.*
- **Incompatible materials:** *Avoid contact with strong oxidizing agents.*
- **Hazardous decomposition products:** *Carbon monoxide and carbon dioxide*

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** *May cause mild skin irritation.*
- **on the eye:** *Strong irritant with the danger of severe eye injury.*
- **Sensitization:** *No sensitizing effects known.*
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant
- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)	<i>None of the ingredients is listed.</i>
· NTP (National Toxicology Program)	<i>None of the ingredients is listed.</i>
· OSHA-Ca (Occupational Safety & Health Administration)	<i>None of the ingredients is listed.</i>

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12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** *Quantitative data on the ecological effect of this product are not available.*
- **Persistence and degradability** *Not easily biodegradable*
- **Bioaccumulative potential** *The product is not expected to be bioaccumulative .*
- **Mobility in soil** *No further relevant information available.*
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** *Not applicable.*
- **vPvB:** *Not applicable.*
- **Other adverse effects** *No further relevant information available.*

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Dispose off waste material according to local, state and federal regulations.
- **Uncleaned packagings:**
- **Recommendation:** *Disposal must be made according to official regulations.*

14 Transport information

· UN-Number	
· DOT, ADR, ADN, IMDG, IATA	Void
· UN proper shipping name	
· DOT, ADR, ADN, IMDG, IATA	Void
· Transport hazard class(es)	
· DOT, ADR, ADN, IMDG, IATA	
· Class	Void
· Packing group	
· DOT, ADR, IMDG, IATA	Void
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	-

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15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

TLV (ACGIH):1000 ppm.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:**



Irritant

· **Risk phrases:**

Risk of serious damage to eyes.

· **Safety phrases:**

Keep out of the reach of children.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Wear eye/face protection.

If swallowed, seek medical advice immediately and show this container or label.

Dispose of this material and its container to hazardous or special waste collection point.

· **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

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16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the

International Transport of Dangerous

Goods by Rail) ICAO: International Civil

Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International

Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial

Hygienists EINECS: European Inventory of Existing

Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A