

### 1 Identification

- **Trade name:** Tulsion MB-101 CC
- **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 in H form & Strong Base Anion Exchange Resin in OH form	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:**  
*CO<sub>2</sub>, 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<sub>x</sub>)*  
*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:**

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

<b>Melting point/Melting range:</b>	<i>-</i>
<b>Boiling point/Boiling range:</b>	<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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· <b>Danger of explosion:</b>	<i>Product does not present an explosion hazard.</i>
· <b>Vapor pressure at 25 °C (77 °F):</b>	<i>0.874 mmHg</i>
· <b>Density:</b>	<i>Not determined.</i>
· <b>Evaporation rate</b>	<i>Not applicable.</i>
· <b>Solubility in / Miscibility with Water:</b>	<i>Insoluble.</i>
· <b>Partition coefficient (n-octanol/water):</b>	<i>Not determined.</i>
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	<i>0.0 %</i>
<b>Solids content:</b>	<i>40-50%</i>
· <b>Other information</b>	<i>Specific gravity [ H2O = 1 ] = 1.1 to 1.3</i>
<i>% Volatiles = 50-60</i>	

#### 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**

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

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

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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*