

1 Identification

- **Trade name:** Tulsion A-23 OH
- **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 treatment, Condensate Polishing Unit, Demineralization, Ultrapure water production
- **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**



GHS05Corrosion

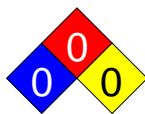
EyeDam.1 H318Causeseriouseyedamage

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Not applicable.
- **Information concerning particular hazards for human and environment:**
The product does not have 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:**
Observe the general safety regulations when handling chemicals.
The product is not subject to identification regulations according to directives on hazardous materials.

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



Health = 1
Fire = 0
Reactivity = 0

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



Health = 1
Fire = 0
Reactivity = 0

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

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3 Composition/information on ingredients

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

· **Dangerous components:**

69011-18-3	Strong Base Anion Exchange Resin in Hydroxide Form	Approx 40
7732 – 18 – 5	water	Approx 60

4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **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** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Wear self contained breathing apparatus for firefighting if necessary.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/surface or ground water.
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **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** Avoid contact with eyes and skin.
- **Information about protection against explosions and fires:** No special measures required.

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- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** *Store in a cool enclosed place.*
- **Information about storage in one common storage facility:** *Do not store with incompatible materials.*
- **Further information about storage conditions:** *Protect from contamination.*
- **Specific end use(s)** *Demineralization, Ultrapure water production, Industrial water treatment*

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** *No further data; see item 7.*
- **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.
- **Additional information:** *The lists that were valid during the creation were used as basis.*
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** *Not required.*
- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **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:** *Goggles recommended during refilling.*

9 Physical and chemical properties

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

Form:	Solid
Color:	Wet Greenish spherical beads
- **Odor:** *Amine Like*
- **Odour threshold:** *Not determined.*
- **pH-value:** *Not determined.*
- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.

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· Flash point:	<i>Not applicable.</i>
· Auto igniting:	<i>427 Deg. C</i>
· Danger of explosion:	<i>Product does not present an explosion hazard.</i>
· Vapor pressure at 20 °C (68 °F):	<i>23 hPa (17 mm Hg)</i>
· Density:	
Vapour density	<i>Not determined.</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>
Water:	<i>Approx 60</i>
· Other information Specific gravity [H₂O = 1]	<i>1.1 to 1.3</i>
% Volatiles	<i>Approx 60</i>

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.*
- **Possibility of hazardous reactions** *No dangerous reactions known.*
- **Conditions to avoid** *No further relevant information available.*
- **Incompatible materials:** *Avoid contact with strong oxidizing agents*
- **Hazardous decomposition products:** *Avoid contact with strong oxidizing agents*

11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

69011-18-3 Styrene-divinylbenzene copolymer with Quaternary ammonium group in Hydroxide form

Oral LD50 >5000mg/kg(rat)

· **Primary irritant effect:**

· **on the skin:** *No irritant effect.*

· **on the eye:** *Severe eye irritation.*

· **Sensitization:** *No sensitizing effects known.*

· **Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** *Eco toxicity is not expected to be cutely toxic*
- **Persistence and degradability** *Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.*
- **Bioaccumulative potential** *No bio-concentration of polymeric component is expected*
- **Mobility in soil** *No further relevant information available.*
- **Additional ecological information:**
- **General notes:** *Not known to be hazardous to water.*
- **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:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** *Disposal must be made according to official regulations.*

14 Transport information

· UN-Number	
· DOT, ADR, IMDG, IATA	<i>Not applicable</i>
· UN proper shipping name	
· DOT, ADR, IMDG, IATA	<i>Not applicable</i>
· Transport hazard class(es)	
· DOT, ADR, IMDG, IATA	
· Class	<i>Not applicable</i>
· Packing group	
· DOT, ADR, IMDG, IATA	<i>Not applicable</i>
· Environmental hazards:	
· Marine pollutant:	<i>No</i>
· Special precautions for user	<i>Not applicable.</i>
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	<i>Not applicable.</i>
· UN "Model Regulation":	<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):
<i>None of the ingredients is listed.</i>
· Section 313 (Specific toxic chemical listings):
<i>None of the ingredients is listed.</i>
· TSCA (Toxic Substances Control Act):
<i>All ingredients are listed.</i>
· Proposition 65
· Chemicals known to cause cancer:
<i>None of the ingredients is listed.</i>
· Chemicals known to cause reproductive toxicity for females:
<i>None of the ingredients is listed.</i>
· Chemicals known to cause reproductive toxicity for males:
<i>None of the ingredients is listed.</i>
· Chemicals known to cause developmental toxicity:
<i>None of the ingredients is listed.</i>
· Carcinogenic categories
· EPA (Environmental Protection Agency)
<i>None of the ingredients is listed.</i>
· TLV (Threshold Limit Value established by ACGIH)
<i>TLV (ACGIH):1000 ppm.</i>
· NIOSH-Ca (National Institute for Occupational Safety and Health)
<i>None of the ingredients is listed.</i>

- **Product related hazard informations:**
*Observe the general safety regulations when handling chemicals.
The product is not subject to identification regulations according to directives on hazardous materials.*
- **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

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:**
*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)*