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## MATERIAL SAFETY DATA SHEET (MSDS)

### CHLORAMINE T (TRIHYDRATE) (FOR SYNTHESIS)

#### 1. Identification of the substance/mixture and of the company/undertaking

##### 1.1. Product identifier

Trade name : CHLORAMINE T (TRIHYDRATE) (FOR SYNTHESIS)

Product code : C0065500500

Identification of the product : CHLORAMINE T (TRIHYDRATE)  
 CAS No: 7080-50-4

##### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use : Industrial. For professional use only.

##### 1.3. Details of the supplier of the safety data sheet

Company identification

SUVCHEM  
 Chaitanya Tower, 2nd Floor, Office # 206,  
 Siddharth Nagar, S.V. Road,  
 Goregaon (West), Mumbai - 400062,  
 Maharashtra, India.  
 Contact: +91 22 28725393 / 94 / 95  
 Email ID: info@suvchem.com/care@suvchem.com

##### 1.4. Emergency telephone number

Phone no. : + 91 22 28725393 / 94 / 95 (9:00am - 6:00 pm) [ Office hours ]

#### 2. Hazards identification -DSD

##### 2.1. Classification of the substance or mixture

##### Classification EC 67/548 or EC 1999/45

Classification : Xn; R22  
 R31  
 C; R34  
 Xn ; R42

##### Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)

Health hazards : Specific Target Organ Toxicity - Single exposure - Category 2 - Warning (CLP : STOT SE 2) H371  
 Skin corrosion - Category 1B - Danger (CLP : Skin Corr. 1B) H314  
 Acute toxicity, Oral - Category 4 - Warning (CLP : Acute Tox. 4) H302  
 Respiratory sensitization - Category 1 - Danger (CLP : Resp. Sens. 1) H334

##### 2.2. Label elements

##### Labelling EC 67/548 or EC 1999/45

## MATERIAL SAFETY DATA SHEET (MSDS)

### CHLORAMINE T (TRIHYDRATE) (FOR SYNTHESIS)

#### 2. Hazards identification -DSD (continued)

Symbol(s)



Symbol(s)

: C : Corrosive

R Phrase(s)

: R22 : Harmful if swallowed.  
 R31 : Contact with acids liberates toxic gas.  
 R34 : Causes burns.  
 R42 : May cause sensitization by inhalation.  
 R68 : Possible risks of irreversible effects.

S Phrase(s)

: S22 : Do not breathe dust.  
 S26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
 S36/37/39 : Wear suitable protective clothing, gloves and eye/face protection.  
 S45 : In case of accident or if you feel unwell, seek medical advice immediately ( show the label when possible).

#### Labelling Regulation EC 1272/2008 (CLP)

Hazard pictograms



Signal words

: Danger

Hazard statements

: H314 : Causes severe skin burns and eye damage.  
 H302 : Harmful if swallowed.  
 H334 : May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H371 : May cause damage to organs.

Precautionary statements

• Prevention

: P285: In case of inadequate ventilation wear respiratory protection.  
 P280: Wear protective gloves, protective clothing, eye protection, face protection.  
 P260: Do not breathe dust, fume, gas, mist, vapours, spray.  
 P264: Wash thoroughly after handling.  
 P270: Do not eat, drink or smoke when using this product.

• Response

: P309+P311: IF exposed or if you feel unwell : Call a POISON CENTER or doctor.  
 P301+P330+P331: IF SWALLOWED : Rinse mouth. Do NOT induce vomiting.  
 P305+P351+P338: IF IN EYES : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P304+P340: IF INHALED : Remove to fresh air and keep at rest in a position comfortable for breathing.  
 P303+P361+P353: IF ON SKIN (or hair) : Remove immediately all contaminated clothing. Rinse skin with water/shower.  
 P342+P311: If experiencing respiratory symptoms : Call a POISON CENTER or doctor.  
 P363: Wash contaminated clothing before reuse.

• Storage

: P405: Store locked up.

• Disposal considerations

: P501: Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

## MATERIAL SAFETY DATA SHEET (MSDS)

### CHLORAMINE T (TRIHYDRATE) (FOR SYNTHESIS)

#### 2. Hazards identification -DSD (continued)

##### 2.3. Other hazards

**Other hazards** : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

#### 3. Composition/information on ingredients

**Substance / Preparation** : CHLORAMINE T (TRIHYDRATE)

Substance.

Contains no other components or impurities which will influence the classification of the product.

#### 4. First aid measures

##### 4.1. Description of first aid measures

**Inhalation** : If experiencing respiratory symptoms : Immediately call a POISON CENTER or doctor. Remove to fresh air and keep at rest in a position comfortable for breathing.

**Skin contact** : Immediately call a POISON CENTER or doctor. Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing.

**Eye contact** : Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor. Rinse cautiously with water for several minutes.

**Ingestion** : Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor.

##### 4.2. Most important symptoms and effects, both acute and delayed

**Symptoms relating to use** : Causes severe skin burns and eye damage.  
 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 May cause damage to organs.  
 Swallowing a small quantity of this material will result in serious health hazard.

##### 4.3. Indication of any immediate medical attention and special treatment needed

**General information** : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

#### 5. Fire-fighting measures

##### 5.1. Extinguishing media

**Suitable extinguishing media** : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

**Unsuitable extinguishing media** : Do not use a heavy water stream.

**Surrounding fires** : Use water spray or fog for cooling exposed containers.

## MATERIAL SAFETY DATA SHEET (MSDS)

### CHLORAMINE T (TRIHYDRATE) (FOR SYNTHESIS)

#### 5. Fire-fighting measures (continued)

##### 5.2. Special hazards arising from the substance or mixture

**Hazardous combustion products** : Under fire conditions, hazardous fumes will be present.  
 Thermal decomposition generates : Corrosive vapours.

##### 5.3. Advice for fire-fighters

**Protection against fire** : Do not enter fire area without proper protective equipment, including respiratory protection.

**Special procedures** : Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

#### 6. Accidental release measures

##### 6.1. Personal precautions, protective equipment and emergency procedures

**For emergency responders** : Equip cleanup crew with proper protection.  
 Ventilate area.  
 Avoid breathing dust, fume, gas, mist, vapours, spray.

**For non-emergency personnel** : Evacuate unnecessary personnel.

##### 6.2. Environmental precautions

**Environmental precautions** : Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

##### 6.3. Methods and material for containment and cleaning up

**Clean up methods** : On land, sweep or shovel into suitable containers. Store away from other materials.

##### 6.4. Reference to other sections

See section 8. Exposure controls/personal protection

#### 7. Handling and storage

##### 7.1. Precautions for safe handling

**Personal protection** : Do not breathe dust, fume, gas, mist, vapours, spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

**Handling** : Do not breathe dust, fume, gas, mist, vapours, spray. Wash thoroughly after handling. Wash contaminated clothing before reuse. Avoid breathing dust, fume, gas, mist, vapours, spray. Do not eat, drink or smoke when using this product.

**Technical protective measures** : Provide good ventilation in process area to prevent formation of vapour.

## MATERIAL SAFETY DATA SHEET (MSDS)

### CHLORAMINE T (TRIHYDRATE) (FOR SYNTHESIS)

#### 7. Handling and storage (continued)

##### 7.2. Conditions for safe storage, including any incompatibilities

<b>Storage</b>	: Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use.
<b>Storage regulation</b>	: Comply with applicable regulations.
<b>Storage - away from</b>	: Strong bases. Strong acids. Sources of ignition. Direct sunlight.

##### 7.3. Specific end use(s)

<b>Specific end use(s)</b>	: None.
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#### 8. Exposure controls/personal protection

##### 8.1. Exposure controls

<b>Personal protection</b>	: Avoid all unnecessary exposure.
• <b>Respiratory protection</b>	: Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. In case of inadequate ventilation wear respiratory protection.
• <b>Hand protection</b>	: Wear protective gloves.
• <b>Skin protection</b>	: Wear suitable protective clothing.
• <b>Eye protection</b>	: Chemical goggles or face shield.
• <b>Others</b>	: When using, do not eat, drink or smoke.

##### 8.2. Control parameters

<b>Occupational Exposure Limits</b>	: No data available.
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#### 9. Physical and chemical properties

##### 9.1. Information on basic physical and chemical properties

<b>Physical state at 20 °C</b>	: Solid.
<b>Colour</b>	: White crystalline
<b>Odour</b>	: Chlorine like
<b>Odour threshold</b>	: No data available.
<b>pH value</b>	: Not applicable.
<b>Melting point [°C]</b>	: 167 - 170 °C
<b>Decomposition point [°C]</b>	: N/A
<b>Critical temperature [°C]</b>	: N/A
<b>Auto-ignition temperature [°C]</b>	: N/A
<b>Flammability (solid, gas)</b>	: N/A

## MATERIAL SAFETY DATA SHEET (MSDS)

### CHLORAMINE T (TRIHYDRATE) (FOR SYNTHESIS)

#### 9. Physical and chemical properties (continued)

Flash point [°C]	: 192 °C
Boiling point [°C]	: N/A
Initial boiling point [°C]	: N/A
Final boiling point [°C]	: N/A
Evaporation rate	: N/A
Vapour pressure [20°C]	: N/A
Vapour pressure mm/Hg	: N/A
Vapour density	: N/A
Density [g/cm <sup>3</sup> ]	: 1,43
Relative density, gas (air=1)	: N/A
Relative density, liquid (water=1)	: N/A
Solubility in water [% weight]	: Soluble in water
Solubility in water	: N/A
Log Pow octanol / water at 20°C	: No data available.
Solubility	: 8 - 10
Viscosity at 40°C [mm <sup>2</sup> /s]	: N/A

#### 9.2. Other information

Explosive properties	: N/A
Explosion limits - upper [%]	: N/A
Explosion limits - lower [%]	: N/A
Oxidising properties	: No data available.

#### 10. Stability and reactivity

##### 10.1. Reactivity

Reactivity	: Highly reactive material.
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##### 10.2. Chemical stability

Chemical stability	: Stable under recommended storage conditions.
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##### 10.3. Possibility of hazardous reactions

Hazardous reactions	: Not established.
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##### 10.4. Conditions to avoid

Conditions to avoid	: Direct sunlight. Extremely high or low temperatures.
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##### 10.5. Incompatible materials

## MATERIAL SAFETY DATA SHEET (MSDS)

### CHLORAMINE T (TRIHYDRATE) (FOR SYNTHESIS)

#### 10. Stability and reactivity (continued)

**Materials to avoid** : Strong acids. Strong bases.

#### 10.6. Hazardous decomposition products

**Hazardous decomposition products** : Fumes. Carbon monoxide. Carbon dioxide.  
 Thermal decomposition generates : Corrosive vapours.

#### 11. Toxicological information

##### 11.1. Information on toxicological effects

##### Acute toxicity

- Inhalation : Based on available data, the classification criteria are not met.
- Dermal : Based on available data, the classification criteria are not met.
- Ingestion : Harmful if swallowed.

##### Corrosion

: Causes severe skin burns and eye damage.

##### Irritation

: Based on available data, the classification criteria are not met.

##### Sensitization

: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

##### Mutagenicity

: Based on available data, the classification criteria are not met.

##### Carcinogenicity

: Based on available data, the classification criteria are not met.

##### Toxic for reproduction

: Based on available data, the classification criteria are not met.

##### STOT-single exposure

: Causes damage to organ.

##### STOT-repeated exposure

: Based on available data, the classification criteria are not met.

##### Aspiration hazard

: Based on available data, the classification criteria are not met.

#### 12. Ecological information

##### 12.1. Toxicity

**Toxicity information** : Not established.

##### 12.2. Persistence - degradability

**Persistence - degradability** : Biodegradable.

##### 12.3. Bioaccumulative potential

**Bioaccumulative potential** : Not established.

##### 12.4. Mobility in soil

**Mobility in soil** : Not established.

##### 12.5. Results of PBT and vPvB assessment



## MATERIAL SAFETY DATA SHEET (MSDS)

### CHLORAMINE T (TRIHYDRATE) (FOR SYNTHESIS)

#### 12. Ecological information (continued)

**Results of PBT and vPvB assessment** : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

##### 12.6. Other adverse effects

**Environmental precautions** : Avoid release to the environment.

#### 13. Disposal considerations

##### 13.1. Waste treatment methods

**General** : Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.  
 Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

#### 14. Transport information

##### 14.1. Land transport (ADR-RID)

**Proper shipping name** : CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.  
**UN N°** : 3263  
**H.I. nr** : 80  
**ADR - Class** : 8  
**Labelling - Transport** : 8 : Corrosive substance.



**ADR - Classification code** : C8  
**ADR - Group** : III  
**ADR - Packing instructions** : P002 R001 LP002  
**ADR - Limited Quantity** : 5 KG  
**ADR - Tunnel code**



: E : Passage forbidden through tunnels of category E.

##### 14.2. Sea transport (IMDG). [English only]

**Proper shipping name** : CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.



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### CHLORAMINE T (TRIHYDRATE) (FOR SYNTHESIS)

#### 14. Transport information (continued)

UN N° : 3263  
 IMO-IMDG - Class or division : 8 : Corrosive substance.  
 IMO-IMDG - Packing group : III  
 IMO-IMDG - Packing instructions : P002 LP02  
 IMO-IMDG - Limited quantities : 5 kg  
 IMO-IMDG - Marine pollution : No  
 EMS-Nr : F-A S-B

##### 14.3. Air transport (ICAO-IATA) [English only]

Proper shipping name : CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.  
 UN N° : 3263  
 IATA - Class or division : 8 : Corrosive substance.  
 IATA - Packing group : III  
 IATA - Passenger and Cargo Aircraft : ALLOWED  
   - Passenger and Cargo - Packing instruction : 860  
   - Passenger and Cargo - Maximum Quantity/Packing : 25 kg  
 IATA - Cargo only : ALLOWED  
   - Cargo only - Packing instruction : 864  
   - Cargo only - Maximum Quantity/Packing : 100 kg  
 IATA - Limited Quantities : 5 kg  
 ERG-Nr : 8L

#### 15. Regulatory information

##### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Safety, health and environmental regulations/legislation specific for the substance or mixture : Ensure all national/local regulations are observed.  
 REACH Restrictions - Annex XVII : The components of this product are not subject to restrictions.  
 REACH Authorisation - Annex XIV : The components of this product are not subject to authorization.

##### 15.2. Chemical Safety Assessment

Chemical Safety Assessment : It has not been carried out.

## MATERIAL SAFETY DATA SHEET (MSDS)

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

### DISCLAIMER:

- **SUVCHEM** Products are to be used as Lab Chemicals for R&D only. Not for drug, medicinal, household or other uses.
- **SUVCHEM** shall not be responsible for any damage resulting from handling or from contact with the above product.
- **SUVCHEM** provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product.

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