

According to Regulation (EC) No 1907/2006

# Chloramine T Trihydrate



## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

**Trade name**

Chloramine T Trihydrate

**CAS number**

7080-50-4

**EC number**

615-172-8

**Synonyms**

sodium chloro[(4-methylphenyl)sulfonyl]azanide hydrate (1:1:3)

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

**Relevant identified uses**

Research and development.

**Not suitable for use in**

Not suitable for human consumption or veterinary purposes.

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

**Supplier**

Molekula Group

Street address

Molekula Ltd, Lingfield Way, Darlington,

DL1 4XX Darlington

United Kingdom

Telephone

+44 (0) 3302 000 333

Email

info@molekula.com

Web site

www.molekula.com

**Contact person**

Kevin Banks

**Email address**

+44 (0) 7769276927

### 1.4. Emergency telephone number

**Poison center/Additional emergency number**

0344 892 0111 - National Poisons Information Service (Newcastle Centre)

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## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

#### Classification

Serious eye damage, hazard category 1  
 Skin corrosion, hazard category 1B  
 Respiratory sensitisation, hazard category 1  
 Acute toxicity, oral, hazard category 4

#### Hazard statements

H302, H314, H318, H334

#### Supplemental hazard statements

EUH031

### 2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

#### Hazard pictograms



#### Signal word

Danger

#### Hazard statements

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

#### Supplemental hazard statements

EUH031 Contact with acids liberates toxic gas.

#### Precautionary statements

P260 Do not breathe dust.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
 P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### 2.3. Other hazards

No data available

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## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

Chemical name	CAS No. EC No. REACH No. Index No.	Concentration	Classification	H-phrases M factor acute M factor chronic	Note
Chloramine T trihydrate	7080-50-4 615-172-8 - -	100%	Acute Tox. 4 - oral, Skin Corr. 1B, Resp. Sens. 1, Eye Dam. 1	H302, H314, H334 - -	-

#### Molecular weight

281.69

#### Substance additional information

For the complete text of H- / EUH-statements mentioned in this section, see section 16.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

IF exposed or concerned: Get medical advice/attention. First aiders/ medical personnel need to protect themselves. Show this Safety Data Sheet (SDS) to medical personnel.

#### Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. If breathing stops, provide artificial respiration. For breathing difficulties oxygen may be necessary.

#### Skin contact

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Immediately call a POISON CENTER/doctor.

#### Eye contact

Remove contact lenses if present. Rinse eyes with water. Continue to rinse for at least 15 minutes and seek medical attention.

#### Ingestion

IF SWALLOWED: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only if the persons are fully conscious and awake). Administer activated charcoal (20 - 40g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralise.

#### Information for doctors

No data available.

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

The severity of the symptoms described will vary dependant of the concentration and the length of exposure. Causes burns by all exposure routes.

See section 11 for more detailed information on health effects and symptoms.

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## **Inhalation**

Single exposure may cause the following adverse effects: Causes severe burns. Difficulty in breathing. Unconsciousness, possibly death.

## **Skin contact**

Single exposure may cause the following adverse effects: Causes severe burns. Blistering may occur. May be absorbed in the body and cause dizziness, nausea and vomiting. Unconsciousness, death.

## **Eye contact**

Single exposure may cause the following adverse effects: Causes serious eye damage. Unconsciousness, possibly death.

## **Ingestion**

Single exposure may cause the following adverse effects: Severe abdominal pain. May cause severe internal injury. Unconsciousness, possibly death.

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

Treat symptomatically. Immediately call a POISON CENTER/doctor.

## **SECTION 5: Firefighting measures**

### **5.1. Extinguishing media**

#### **Suitable extinguishing media**

In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.

#### **Unsuitable extinguishing media**

No specific fire fighting procedure given.

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

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Nitrous gases (NO<sub>x</sub>). Sulphurous gases (SO<sub>x</sub>). Hydrogen Chloride gas sodium oxides The product is non-combustible. Risk of vapour concentration on the floor and in low-lying areas. Explosive mixtures may be formed at elevated temperatures. Ambient fire may liberate hazardous vapours.

### **5.3. Advice for firefighters**

#### **Special protective equipment for fire-fighters**

Evacuate area. Avoid breathing gas, fume, vapours or spray. Prevent skin contact by maintaining a safe distance and by wearing suitable protective equipment/ clothing. Cool containers exposed to heat with water spray and remove container, if no risk is involved.

## **SECTION 6: Accidental release measures**

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

Do not breathe dust or mist. Avoid contact with skin and eyes.

In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.

For personal protection, see section 8.

### **6.2. Environmental precautions**

Avoid discharge into drains, water courses or onto the ground.

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

Collect with absorbent, non-combustible material into suitable containers. Avoid dust formation.

## 6.4. Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Preventive handling precautions

Work under hood Do not inhale substance/mixture

#### General hygiene

Immediately change contaminated clothes. Wash skin thoroughly after handling. For precautions see section 2.2.

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

Store in a dry place. Store in a closed container. Store in locked, well ventilated room and isolated from acids.

Store at ambient temperature. Store contents under inert gas. Air sensitive. Storage class : 8A

Combustible. corrosive hazardous materials

### 7.3. Specific end use(s)

No specific usage precautions noted. :

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure limits

No occupational exposure limit assigned.

### 8.2. Exposure controls

#### Eye / face protection

Wear eye protection.

#### Hand protection

Wear protective gloves. Recommended gloves: Nitrile.

Glove Thickness: 0.11mm

Breakthrough time: 480 minutes

Always inspect gloves before use. If signs of wear and tear are noticed then the gloves should be replaced.

No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals. Wash contaminated skin thoroughly after handling.

#### Other skin protection

Wash skin thoroughly after handling.

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## **Respiratory protection**

Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided.

## **Environmental exposure controls**

Avoid discharge into drains.

## **SECTION 9: Physical and chemical properties**

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

#### **Physical state**

Solid

#### **Colour**

White / off-white.

#### **Odour**

Chlorine.

#### **Melting point / freezing point**

167 - 170 °C

#### **Boiling point or initial boiling point and boiling range**

No data available

#### **Flammability**

No data available

#### **Lower and upper explosion limit**

No data available

#### **Flash point**

192 °C

#### **Method**

CC (Closed cup).

#### **Auto-ignition temperature**

No data available

#### **Decomposition temperature**

No data available

#### **pH**

8.0 - 10.0 at 50 g/l at 20 °C

#### **Kinematic viscosity**

No data available

#### **Solubility**

soluble

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**Partition coefficient n-octanol/water**

No data available

**Vapour pressure**

No data available

**Density and/or relative density**

No data available

**Relative vapour density**

No data available

**Particle characteristics**

No data available

## 9.2. Other information

No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Formation of explosive mixtures with: Heating.  
15 Kelvin below the flash point is to be rated as critical  
Contact with acids liberates toxic gas.

### 10.2. Chemical stability

Stable under the prescribed storage conditions.

### 10.3. Possibility of hazardous reactions

Violent reaction with:  
Strong oxidising agents.  
Generates dangerous gases or fumes in contact with:  
Acids.

### 10.4. Conditions to avoid

Heating.

### 10.5. Incompatible materials

Strong oxidising agents. Acids

### 10.6. Hazardous decomposition products

See section 5.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

**Acute toxicity**

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Product / Substance name CAS / EC no.	Dose descriptor	Value / Dose	Duration of exposure	Test animals
Chloramine T trihydrate 7080-50-4 / 615-172-8	Acute Toxicity (Oral LD50):	935 mg/kg	-	Rat
Chloramine T trihydrate 7080-50-4 / 615-172-8	Acute Toxicity (Inhalation LC50):	0.275 mg/l	4 hours	Rat

## Skin corrosion/irritation

Product / Substance name CAS / EC no.	Result	Duration of exposure	Species
Chloramine T trihydrate 7080-50-4 / 615-172-8	CAUSES BURNS.	4 hours	Rabbit

## Serious eye damage/irritation

Product / Substance name CAS / EC no.	Result	Duration of exposure	Species
Chloramine T trihydrate 7080-50-4 / 615-172-8	Causes serious eye damage.	72 hours	Rabbit

## Respiratory or skin sensitisation

Product / Substance name CAS / EC no.	Result
Chloramine T trihydrate 7080-50-4 / 615-172-8	May cause allergy or asthma symptoms or breathing difficulties if inhaled.

## Germ cell mutagenicity

Product / Substance name CAS / EC no.	Result	Metabolic activation / Exposure	Species
Chloramine T trihydrate 7080-50-4 / 615-172-8	Negative.	with and without metabolic activation	Escherichia coli/Salmonella typhimurium

## Carcinogenicity

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

## STOT-single exposure

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

## STOT-repeated exposure

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



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## Aspiration hazard

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

## 11.2. Information on other hazards

No data available

## SECTION 12: Ecological information

### 12.1. Toxicity

#### Acute fish toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species
Chloramine T trihydrate 7080-50-4 / 615-172-8	LC50	100 mg/l	96 hours	Onchorhynchus mykiss (Rainbow trout)

#### Acute algae toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species
Chloramine T trihydrate 7080-50-4 / 615-172-8	ErC50	13 mg/l	96 hours	Pseudokirchneriella sub- capitata Green. Algae

#### Acute crustacean toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species
Chloramine T trihydrate 7080-50-4 / 615-172-8	NOEC	1.1 mg/l	21 days	Daphnia magna
Chloramine T trihydrate 7080-50-4 / 615-172-8	EC50	4.5 mg/l	48 hours	Daphnia magna

#### Micro-/macro organism toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species
Chloramine T trihydrate 7080-50-4 / 615-172-8	EC50	37 mg/l	3 hours	Activated sludge.

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Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species
Chloramine T trihydrate 7080-50-4 / 615-172-8	NOEC	1.5 mg/l	35 days	Pimephales promelas (Fat-head Minnow)

## 12.2. Persistence and degradability

### Persistence and degradability

The substance is readily biodegradable.

## 12.3. Bioaccumulative potential

### Bioaccumulative potential

Onchorhynchus mykiss (Rainbow trout) 1 hours at 11.8 □ 20 mg/l

## 12.4. Mobility in soil

No data available

## 12.5. Results of PBT and vPvB assessment

No data available

## 12.6. Endocrine disrupting properties

No data available

## 12.7. Other adverse effects

No data available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Disposal considerations

Dispose of contents/container in accordance with local regulations.

## SECTION 14: Transport information

### 14.1. UN number

3263

### 14.2. UN proper shipping name

#### ADR / RID / ADN proper shipping name

CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.

#### IMDG proper shipping name

CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.

#### IATA proper shipping name

Corrosive solid, basic, organic, n.o.s.

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## 14.3. Transport hazard class(es)

### Label

ADR/RID/ADN



8

IMDG



8

IATA



8

### ADR / RID Class

8

### ADR / RID Classification code

C8

### ADR / RID hazard identification number

80

### IMDG Class

8

### IATA Class

8

### ADN Class

8

### ADN Class Code

CS

## 14.4. Packing group

ADR / RID / ADN: II

IMDG: II

IATA: II

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## 14.5. Environmental hazards

### IMDG EmS

F-A, S-B

## 14.6. Special precautions for user

Tunnel restriction code: E

Transport category: 2

## 14.7. Maritime transport in bulk according to IMO instruments

IBC Instruction: IBC08

## SECTION 15: Regulatory information

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

#### EU regulations

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

#### National regulations

No data available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

## SECTION 16: Other information

### Phrase meaning

Eye Dam. 1 - Serious eye damage, hazard category 1

Skin Corr. 1B - Skin corrosion, hazard category 1B

Resp. Sens. 1 - Respiratory sensitisation, hazard category 1

Acute Tox. 4 - oral - Acute toxicity, oral, hazard category 4

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

EUH031 Contact with acids liberates toxic gas.