

# Material Safety Data Sheet

According to GHS rev 4

Trichloroisocyanuric acid

SDS Record Number: CSSS-TCO-010-111709

Printing date: 21/06/012

Version 1.1

Revision date: 21/06/012

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

### 1.1 Product identifier:

Identification on the label/Trade name: Trichloroisocyanuric acid  
Product code: Not available  
Identification of the product: CAS# 87-90-1; EC# 201-782-8

### 1.2 Relevant identified uses of the substance and uses advised against:

#### 1.2.1 Identified uses:

Water treatment.

#### 1.2.2 Uses advised against:

Not available.

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

Supplier(Manufacturer): HEZE HUAYI CHEMICAL CO.,LTD  
Address: NO.1 EAST CONSTRUCTION STREET , JUANCHENG  
Contact person(E-mail): -  
Telephone: +86-530-2429008  
Fax: +86-530-2999589

### 1.4 Emergency telephone Number:

+86-530-2429008

Available outside office hours?

YES

NO

## 2 Hazards Identification

### 2.1 Classification of the substance

#### 2.1.1 Classification:

The substance is classified as following according to GB 13690-2009 (GHS) and 67/548/EEC:

GB 13690-2009 (GHS)	
Hazard classes/Hazard categories	Hazard statement
Ox. Sol. 2	H272
Acute Tox. 4	H302
Eye Irrit. 2	H319
STOT SE 3	H335
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

For full text of H- phrases: see section 2.2.

67/548/EEC	
Hazards characteristics	R-Phrases
O	R8
Xn	R22
Xi	R36/37
-	R31
N	R50/53

For full text of R- phrases: see section 16.

### 2.2 label elements

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**Hazard Pictograms:**



**Signal Word(S):**

Danger

**Hazard Statement:**

H272: May intensify fire; oxidiser.  
H302: Harmful if swallowed.  
H319: Causes serious eye irritation.  
H335: May cause respiratory irritation.  
H410: Very toxic to aquatic life with long lasting effects.  
EUH031: Contact with acids liberates toxic gas.

**Precautionary Prevention:**

**Statement**

P210: Keep away from heat/ sparks/open flames/hot surfaces. — No smoking.  
P220: Keep/Store away from clothing/combustible materials.  
P221: Take any precaution to avoid mixing with combustibles.  
P261: Avoid breathing dust/fume/gas/mist/vapours/spray.  
P264: Wash hands thoroughly after handling.  
P270: Do not eat, drink or smoke when using this product.  
P271: Use only outdoors or in a well-ventilated area.  
P273: Avoid release to the environment.

**Precautionary Response:**

**Statement**

P301 + P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position 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.  
P312: Call a POISON CENTER or doctor/physician if you feel unwell.  
P330: Rinse mouth.  
P337 + P313: If eye irritation persists: Get medical advice/attention.  
P370 + P378: In case of fire: Use water, dry sand for extinction.  
P391: Collect spillage.

**Precautionary Storage:**

**Statement**

P403 + P233: Store in a well-ventilated place. Keep container tightly closed.  
P405: Store locked up.

**Precautionary Disposal:**

**Statement**

P501: Dispose of contents/container in according with local regulation.

### 3 Composition/information on ingredients

**Substance/Mixture:**

Substance

**Ingredient(s):**

Chemical Name	Registration No.	CAS No.	EC No.	Active Ingredient
Trichloroisocyanuric acid	N/A	87-90-1	201-782-8	99%

### 4 First aid measures

**4.1 Description of first aid measures:**

In all cases of doubt, or when symptoms persist, seek medical attention.

**4.1.1 In case of inhalation:**

Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. DO NOT use mouth-to-mouth respiration.

**4.1.2 In case of skin contact:**

Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Remove contaminated clothing and shoes.

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#### **4.1.3 In case of eyes contact:**

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

#### **4.1.4 In case of ingestion:**

Never give anything by mouth to an unconscious person. Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

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

Harmful if swallowed.

Causes serious eye irritation.

May cause respiratory irritation.

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

If skin irritation or rash occurs, get medical advice/attention.

## **5 Fire-Fighting measures**

### **5.1 Extinguishing media:**

**Suitable extinguishing media:** water, dry sand.

**Unsuitable extinguishing media:** Not available.

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

During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

### **5.3 Advice for fire-fighters:**

Wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

## **6 Accidental release measures**

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

Avoid dust formation. Evacuate area of all unnecessary personnel. Avoid contact with skin, eyes and clothing. Use personal protective equipment.

### **6.2 Environmental Precautions:**

Avoid disposing into drainage/sewer system or directly into the aquatic environment.

### **6.3 Methods for Containment and Cleaning up:**

Clean up spills immediately, using the appropriate protective equipment. Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions. Remove all sources of ignition. Do not use combustible materials such as paper towels to clean up spill.

### **6.5 Additional information:**

Wet clean or vacuum up solids.

Don't use a brush or compressed air for cleaning surfaces or clothing.

Clear spills immediately.

## **7 Handling and storage**

### **7.1 safe handling:**

#### **7.1.1 Protective measures:**

Avoid breathing dusts or fumes. Ensure good ventilation/exhaustion at the workplace. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse.

#### **7.1.2 Advice on general occupational hygiene:**

Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

### **7.2 Storage:**

Keep away from heat, sparks, and flame. Do not store near combustible materials. Corrosives area. Keep away from acids.

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Store protected from moisture.

## **8 Exposure control/personal protection**

### **8.1 Control parameters:**

**8.1.1 Occupational exposure limits:** Not listed

**8.2.1 Appropriate engineering controls:** Use local exhaust or general ventilation as required to minimize exposure to dust and maintain the concentration of contaminants below the TLVs. Wash hands during breaks and at the end of the work. Avoid contact with the eyes and skin.

### **8.2 Personal protection :**

Eye/face protection	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Hand protection	Wear appropriate gloves to prevent skin exposure.
Body protection	Wear suitable protective clothing to prevent skin exposure.
Respiratory protection	Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.
Thermal hazards	Wear suitable protective clothing to prevent heat.

## **9 Physical and chemical properties**

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

Appearance:	Granules/ tablet
Colour:	White
Odour:	Not available
Odour threshold:	Not available
pH:	2.7-3.3
Melting point/range (°C):	247-251°C
Boiling point/range (°C) :	Not available
Flash point (°C) :	121°C
Evaporation rate:	Not applicable
Flammability (solid, gas);	Not available
Ignition temperature (°C) :	Not determined
Upper/lower flammability/explosive limits:	Not determined
Vapour pressure (20°C) :	No information available
Vapour density:	Not determined
Relative Density (25°C):	Not determined
Bulk density (20°C) :	>1 g/cm <sup>3</sup> (solid)
Water solubility (g/l) at 25°C :	1.2g/100g
n-Octanol/Water (log Po/w) :	Not determined
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity, dynamic (mPa s) :	Not determined
Explosive properties:	Not determined
Oxidising properties:	Not applicable

### 9.2. Other information:

Fat solubility(solvent– oil to be specified) etc:	Not available
Surface tension:	Not available
Dissociation constant in water( pKa):	Not available
Oxidation-reduction Potential:	Not available

## **10 Stability and reactivity**

### **10.1 Reactivity:**

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The substance is stable under normal storage and handling conditions.

## 10.2 Possibility of hazardous reactions:

No dangerous reactions known.

## 10.3 Conditions to avoid:

Incompatible materials.

## 10.4 Incompatible materials:

Moisture, reducing agents, acids, methanoic acid, oxalic acid.

## 10.5 Hazardous decomposition products:

Hydrogen chloride, nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, nitrogen.

## 11 Toxicological information

### 11.1 Toxicokinetics, metabolism and distribution

**Non-human toxicological data:** Not available

### 11.2 Information on toxicological effects

#### Acute toxicity:

LD50( Oral, Rat): Not available

LD50(Dermal Rabbit): Not available

Irritation: Eye irritation

Corrosion: Not available

**Skin corrosion/Irritation:** Not classified

**Serious eye damage/irritation:** Causes serious eye irritation.

**Respiratory or skin sensitization:** Not classified

**Germ cell mutagenicity:** Not classified

**Carcinogenicity:** Not classified

**reproductive toxicity:** Not classified

**STOT- single exposure:** May cause respiratory irritation.

**STOT-repeated exposure:** Not classified

**Aspiration hazard:** Not classified

## 12 Ecological information

### Toxicity:

Acute toxicity		Time	Species	Method	Evaluation	Remarks
LC50	N/A	96h	Fish	OECD 203	N/A	N/A
LC50	N/A	48h	Daphnia	OECD 202	N/A	N/A
EC50	N/A	96h	Algae	OECD 201	N/A	N/A

**Persistence and degradability:** No data available.

**Bioaccumulative potential:** No data available.

**Mobility in soil:** Not available.

## 13 Disposal considerations

### 13.1 Waste treatment methods

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Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

## 13.2 Product / Packaging disposal:

If empty container retains product residues, all label precautions must be observed. Return for reuse or dispose according to national or local regulations. .

## 14 Transport information

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN-Number:	2468	2468	2468
UN Proper shipping name:	Trichloroisocyanuric acid, dry	Trichloroisocyanuric acid, dry	Trichloroisocyanuric acid, dry
Transport hazard Class:	5.1	5.1	5.1
Packaging group:	II	II	II
Environmental hazards:	Yes	Yes	Yes
Special precautions for user:	See section 2.2	See section 2.2	See section 2.2

## 15 Regulation information

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

Whether be recorded by other nations chemicals directory :

EU(EINECS )	yes
U.S.A(TSCA -Toxic Substances Control Act)	yes
Canada(DSL –Domestic Substances List)	yes
Canada (NDSL –Non Domestic Substances List)	no
Japan (METI -Ministry of Economy, Trade and Industry)	yes
Australia(AICS -Australian Inventory of Chemical Substances)	yes
New Zealand(HSNO -Hazardous Substances and New Organisms )	yes
Korea(KECL -Korean Existing Chemicals List)	yes
China (IECSC –Inventory of Existing Chemical Substances Manufactured or Imported in China)	yes

### 15.2 Special consideration for downstream users:

Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

## 16 Other information

16.1 Indication of changes      Version 1.1    Amended by GHS rev 4

### 16.2 Relevant R- phrases (number and full text):

R8 Contact with combustible material may cause fire.

R22 Harmful if swallowed.

R31 Contact with acids liberates toxic gas.

R36/37 Irritating to eyes and respiratory system.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### 16.3 Training instructions:

Not applicable.

### 16.4 Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

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## **16.5 Notice to reader:**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees.

This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.