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## Material Safety Data Sheet

### Trichloroisocyanuric acid

#### Section 1: Chemical Product and Company Identification

**Product Name:** Trichloroisocyanuric acid

**CAS#:** 87-90-1

**RTECS:** XZ1925000

**Synonym:** 1,3,5-Trichloro-1,3,5-triazinane-2,4,6-trione; 1,3,5-Trichloro-1,3,5-triazine-2,4,6-(1H, 3H, 5H)-trione  
Symclosene, Trichloroiminocyanuric acid, Trichloroisocyanuric acid; TCCA

**Chemical Name:** 1,3,5-Trichloroisocyanuric acid.

**Chemical Formula:** C<sub>3</sub>Cl<sub>3</sub>N<sub>3</sub>O<sub>3</sub>

**Contact Information for Emergency:** (0086) 551 65418678

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#### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS # %	By Weight
Trichloroisocyanuric acid	87-90-1	90.0%

**Toxicological Data on Ingredients:** Not applicable.

#### Section 3: Hazards Identification

##### EMERGENCY OVERVIEW

Harmful if swallowed. Contact with acids liberates toxic gas. Irritating to eyes and respiratory system. Contact with combustible material may cause fire. Hygroscopic. Potential Health Effects

**Eye:** May cause conjunctivitis. May cause permanent corneal opacification.

**Skin:** May cause severe irritation and possible burns.

**Ingestion:** Harmful if swallowed. May cause liver and kidney damage. May cause nausea, vomiting, and diarrhea, possibly with blood.

**Inhalation:** Causes respiratory tract irritation. May cause acute pulmonary edema, asphyxia, chemical pneumonitis, and upper airway obstruction caused by edema.

**Chronic:** May cause liver and kidney damage. Effects may be delayed

#### Section 4: First Aid Measures

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid immediately ,or take to a doctor.

**Skin:** 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.

**Ingestion:** If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately. DO NOT induce vomiting. Allow the victim to rinse his mouth and then to drink 2-4 cupfuls of water, and seek medical advice.

**Inhalation:** Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, artificial respiration. If breathing is difficult, give oxygen.

**Notes to Physician:** Treat symptomatically and supportively.

#### Section 5: Fire and Explosion Data

**General Information:**

As in any fire,wear a self-contained breathing apparatus in pressure-demand,MSHA/NIOSH(approved or equivalent),and full protective gear. Strong oxidizer. Contact with combustible materials may cause a fire.

**Extinguishing Media:**

In case of fire, use water, dry chemical ,chemical foam, or alcohol-resistant foam, Use agent most appropriate to extinguish fire.

**Autoignition Temperature:** Not available.

**Flash Point:** 225 deg C(437.00 deg F)

Explosion Limits, Lower: Not available.

**Upper:** Not available.

#### Section 6: Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal.

#### Section 7: Handling and Storage

**Handling:** Avoid contact with clothing and other combustible materials.

**Storage:** Do not store near combustible materials. Corrosives area.

#### Section 8: Exposure Controls/Personal Protection

**Engineering Controls:**

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels .

**OSHA Vacated PELs:** Trichloroisocyanuric acid.

No OSHA Vacated PELs are listed for this chemical.

**Personal Protective Equipment:**

**Eyes:** Wear chemical goggles,Wear safety glasses and chemical goggles if splashing is possible.

**Skin:** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Clothing :** Wear appropriate protective clothing to minimize contact with skin.

**Respirators:** Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

**Section 9: Physical and Chemical Properties**

**Chemical Stability:**

Stable under normal temperatures and pressures.

**Conditions to Avoid:**

Incompatible materials ,strong oxidants.

**Incompatibilities with Other Materials:**

Strong reducing agents-strong bases-moist air or water.

**Hazardous Decomposition Products:**

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

**Hazardous Polymerization:**

Has not been reported .

**Section 10: Stability and Reactivity Data**

Physical State:	Solid
Appearance:	White granular or powder or tablets
Odor:	None reported.
PH:	2.7-3.3
Vapor Density:	Not available.
Vapor Pressure:	Not available.
Evaporation Rate:	Not available.
Viscosity:	Not available.
Boiling Point:	Not available.
Freezing/Melting Point:	249.00-251.00deg C.
Decomposition Temperature:	225 deg C.
Solubility:	1.2G/100ML.(25°C).
Specific Gravity/Density:	Not available.
Molecular Formula:	$C_3N_3O_3Cl_3$ .
Molecular Weight:	232.44.

<b>Section 11: TOXICOLOGICAL INFORMATION</b>
<b>CAS#</b> 87-90-1 <b>RTECS#:</b> :XZ1925000 <b>LD50/LC50:</b> CAS#87-90-1: Oral, rat: LD50=406mg/kg. Carcinogenicity: Trichloroisocyanuric acid Not listed by ACGIH,IARC, NIOSH, NTP, or OSHA.
<b>Section 12: ECOLOGICAL INFORMATION</b>
<b>Ecotoxicity:</b> Not available
<b>Section 13: Transport Information</b>
<b>Shipping Name:</b> TRICHLOROISOCYANURIC ACID <b>Hazard Class:</b> 5.1 <b>UN NO.:</b> UN2468 <b>Packing Group:</b> II IMO No information available. IATA No information available. RID/ADR No information available.
<b>Section 14: REGULATORY INFORMATION</b>
<b>US FEDERAL</b> TSCA CAS#87-90-1 is listed on the TSCA inventory. Health & Safety Reporting List None of the chemicals are on the Health & Safety Reporting List. Chemical Test Rules None of the chemicals in this product are under a Chemical Test Rule. Section 12b None of the chemicals are listed under TSCA Section 12h. TSCA Significant New Use Rule None of the chemicals in this material have a SNUR undet TSCA.SARA Section 302(RQ) None of the chemicals in this material have an RQ. Section 302(TPQ) None of the chemicals in this product have an TPQ. Section 313 No chemicals are reportable under Section 313. <b>Clean Air Act:</b> This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depletions. This material does not contain any Class 2 Ozone depletions. <b>Clean Water Act:</b> None of the chemical in this product are listed as Hazardous

Substances under the CWA.

None of the chemical in this product are listed as Priority

Pollutants under the CWA.

None of the chemical in this product are listed as Toxic Pollutants

Under the CWA.

**OSCHA:** None of the chemicals in this product are considered highly hazardous by OSHA.

**Hazard Phrases:** XN O

**Risk Phrases:** R 22 Harmfully if swallowed.

R 31 Contact with acids liberates toxic gas.

R 36/37 Irritating to eyes and respiratory system.

R 8 Contact with combustible material may cause fire.

**Safety Phrases:** S 26 In case of contact with eyes ,rinse immediately with  
Plenty of water and seek medical advice.

S 41 In case of fire and/or explosion do not breathe fumes.

S 8 Keep container dry .

**WGK(Water Danger/Protection)**

CAS#87-90-1:No information available.

**Canada :**CAS#87-90-1 is listed on Canada's DSL/NDSL. List.

WHMIS: Not available.

CAS#87-90-1 is listed on Canada's Ingredient Disclosure List.

#### **Section 15: ADDITIONAL INFORMATION**

The information above is believed to be accurate and represents the best information currently available to us . However, we make no warranty of merchantability or any other warranty express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.

#### **Section 16: OTHER INFORMATION**

References: Not available.

Other Special Considerations: Not available.

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