

Trichloroisocyanuric Acid MSDS

1. Product Name and Identification

Product Name: [Trichloroisocyanuric Acid](#)

Synonyms: TCCA, Trichloro-S-Triazinetrione, Trichlor, Symclosene

CAS Number: 87-90-1

Recommended Uses: Disinfectant, Water treatment, Bleaching agent

Manufacturer/Distributor Details:

- **Name:** [Insert Manufacturer/Distributor Name]
 - **Address:** [Insert Address]
 - **Emergency Contact Number:** [Insert Contact Number]
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2. Composition/Ingredients

Substance/Preparation: Substance

Chemical Name: Trichloroisocyanuric Acid

CAS Number: 87-90-1

Percent Composition: $\geq 99\%$

3. Hazards Identification

Classification of the Substance:

- **Oxidizing Solids:** Category 2
- **Acute Toxicity (Oral):** Category 4
- **Skin Corrosion/Irritation:** Category 1B
- **Serious Eye Damage/Irritation:** Category 1
- **Aquatic Toxicity:** Chronic Category 1

Hazard Statements:

- May intensify fire; oxidizer.
- Harmful if swallowed.
- Causes severe skin burns and eye damage.
- Very toxic to aquatic life with long-lasting effects.

Precautionary Statements:

- Keep away from heat, flames, and combustible materials.
- Wear protective gloves, clothing, and eye/face protection.
- Avoid release to the environment.
- If in contact with acids, toxic gases may be released.

Pictograms:

- [Insert placeholder for flame over circle, corrosive, and environmental hazard symbols]

Additional Notes: Use caution in areas where this product is stored or handled near incompatible substances.

4. First Aid Measures

General Information: Seek immediate medical attention if symptoms develop or exposure is significant.

Eyes: Rinse cautiously with water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing and seek immediate medical help.

Skin: Remove contaminated clothing and rinse skin thoroughly with water for at least 15 minutes. Wash with soap and water. Get medical attention for burns or persistent irritation.

Inhalation: Move the exposed person to fresh air and keep comfortable for breathing. If respiratory symptoms develop, seek medical help immediately.

Ingestion: Rinse mouth with water. Do NOT induce vomiting unless instructed by a medical professional. Drink plenty of water and seek immediate medical assistance.

Important Notes for Physicians: Treat based on symptoms. The substance may irritate mucous membranes and tissues.

5. Handling and Storage

Handling:

- Avoid contact with eyes, skin, and clothing.
- Do not breathe dust or fumes.
- Keep product away from moisture, heat, and combustible materials.

Storage:

- Store in a cool, dry, well-ventilated area.
 - Keep container tightly closed when not in use.
 - Separate from acids, reducing agents, and flammable materials.
 - Avoid storing in areas exposed to direct sunlight or excessive humidity.
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6. Exposure Controls/Personal Protection

Engineering Controls:

- Use exhaust ventilation to control dust exposure.

Personal Protection Equipment (PPE):

- **Eye Protection:** Safety goggles or face shields.
- **Skin Protection:** Wear chemical-resistant gloves and protective clothing.
- **Respiratory Protection:** Use an appropriate respirator when dust or fumes are generated above permissible exposure levels.
- **Other:** Ensure emergency eye wash stations are available in the work area.

Hygiene Measures:

- Wash hands and exposed skin thoroughly after handling.
- Do not eat, drink, or smoke while working with this product.

Recommended Workplace Exposure Standards:

- No specific thresholds established; limit dust exposure as low as reasonably achievable.
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7. Physical and Chemical Properties

- **Appearance:** White powder or crystalline solid
- **Odor:** Chlorine-like
- **Odor Threshold:** Not determined
- **pH:** 2.7 (1% solution)
- **Melting Point:** Decomposes above 225°C
- **Boiling Point:** Not applicable
- **Flash Point:** Not flammable
- **Solubility:** Soluble in water (solubility decreases in cooler temperatures)
- **Density:** Approx. 2.07 g/cm³
- **Vapor Pressure:** Negligible at room temperature
- **Molecular Formula:** C₃Cl₃N₃O₃

- **Flammability:** Not flammable, but an oxidizer
 - **Explosive Properties:** Not explosive under normal conditions
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8. Stability and Reactivity

Chemical Stability: Stable under recommended storage conditions.

Conditions to Avoid: Exposure to heat, moisture, and incompatible materials (e.g., acids, ammonium compounds).

Materials to Avoid: Acids, reducing agents, combustible materials, and organics.

Hazardous Decomposition Products: When heated or in contact with acids, may release chlorine gas and other toxic fumes.

Polymerization: Does not polymerize under normal conditions.

9. Toxicological Information

Acute Toxicity:

- Oral LD50 (Rat): Approx. 406-630 mg/kg

Skin Corrosion/Irritation: Causes severe burns upon contact.

Eye Damage/Irritation: Causes severe eye damage with potential vision impairment.

Respiratory Effects: Dust or fumes may cause irritation to the respiratory tract. Prolonged exposure may lead to coughing, shortness of breath, and other respiratory symptoms.

Chronic Effects: No known long-term chronic effects; however, repeated exposure to dust or fumes should be avoided.

Carcinogenicity: Not classified as carcinogenic by IARC, NTP, or OSHA.

Other Information: The acute toxicity is primarily due to its oxidizing and corrosive properties.

10. Disposal Considerations

Waste Disposal Methods:

- Dispose of unused product as hazardous waste in accordance with local, state, and federal regulations.
- Avoid discharge to natural water sources or the environment.

Packaging Disposal:

- Containers should be rinsed thoroughly before recycling or disposal. Ensure all residue is neutralized per local guidelines.

Environmental Precautions: Trichloroisocyanuric acid is highly toxic to aquatic life and should not be released into waterways.
