1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Cyanuric chloride
Product Number: C95501
Brand: Aldrich
Product Use: For laboratory research purposes.
Supplier: Sigma-Aldrich
Manufacturer: Sigma-Aldrich Corporation
3050 Spruce Street
SAINT LOUIS MO  63103
USA
Telephone: +1 800-325-5832
Fax: +1 800-325-5052
Emergency Phone #: (314) 776-6555
Preparation Information: Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Target Organ Effect, Highly toxic by inhalation, Toxic by ingestion, Skin sensitiser, Corrosive

Target Organs
Central nervous system, Heart

GHS Classification
Acute toxicity, Inhalation (Category 2)
Acute toxicity, Dermal (Category 5)
Acute toxicity, Oral (Category 4)
Skin corrosion (Category 1B)
Serious eye damage (Category 1)
Skin sensitization (Category 1)

GHS Label elements, including precautionary statements

Pictogram

Signal word: Danger

Hazard statement(s)
H302 Harmful if swallowed.
H313 May be harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H330 Fatal if inhaled.

Precautionary statement(s)
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/ protective clothing/ eye protection/ face protection.

Wear respiratory protection.

IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or doctor/ physician.

Specific treatment is urgent (see supplemental first aid instructions on this label).

Wash contaminated clothing before reuse.

Store in a well-ventilated place. Keep container tightly closed.

Dispose of contents/ container to an approved waste disposal plant.

HMIS Classification
- Health hazard: 3
- Chronic Health Hazard: *
- Flammability: 0
- Physical hazards: 0

NFPA Rating
- Health hazard: 4
- Fire: 0
- Reactivity Hazard: 0

Potential Health Effects
- Inhalation: May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
- Skin: May be harmful if absorbed through skin. Causes skin burns.
- Eyes: Causes eye burns.
- Ingestion: Toxic if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: 2,4,6-Trichloro-1,3,5-triazine

Formula: C₃Cl₃N₃

Molecular Weight: 184.41 g/mol

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4,6-Trichloro-1,3,5-triazine</td>
<td>108-77-0</td>
<td>203-614-9</td>
<td>613-009-00-5</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.
5. FIRE-FIGHTING MEASURES

Conditions of flammability
Not flammable or combustible.

Suitable extinguishing media
Dry powder

Special protective equipment for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Hydrogen chloride gas

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Do not flush with water. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place. Never allow product to get in contact with water during storage.

Recommended storage temperature: 2 - 8 °C

Air and moisture sensitive. Handle and store under inert gas.

8. EXPOSURE CONTROLS/PERSOAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Complete suit protecting against chemicals, Flame retardant protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Hygiene measures**
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**
- Form: solid
- Colour: no data available

**Safety data**
- pH: no data available
- Melting point/freezing point: Melting point/range: 145 - 147 °C (293 - 297 °F) - lit.
- Boiling point: 190 °C (374 °F) - lit.
- Flash point: no data available
- Ignition temperature: no data available
- Autoignition temperature: no data available
- Lower explosion limit: no data available
- Upper explosion limit: no data available
- Vapour pressure: 0.0 hPa (0.0 mmHg) at 20 °C (68 °F) 3 hPa (2 mmHg) at 70 °C (158 °F)
- Density: no data available
- Water solubility: insoluble
- Partition coefficient: log Pow: 0.512
- Relative vapour density: 6.37 - (Air = 1.0)
- Odour: no data available
- Odour Threshold: no data available
- Evaporation rate: no data available

### 10. STABILITY AND REACTIVITY

**Chemical stability**
Stable under recommended storage conditions.

**Possibility of hazardous reactions**
Reacts violently with water.

**Conditions to avoid**
Exposure to moisture.

**Materials to avoid**
Strong oxidizing agents, Strong acids, Alcohols, Dimethylformamide, Amines, Dimethyl sulfoxide. (DMSO)

**Hazardous decomposition products**
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Hydrogen chloride gas
Other decomposition products - no data available

### 11. TOXICOLOGICAL INFORMATION
Acute toxicity

Oral LD50
LD50 Oral - rat - 315 mg/kg

Inhalation LC50
LC50 Inhalation - rat - 4 h - 170 mg/m3

Dermal LD50
LD50 Dermal - rabbit - > 2,000 mg/kg

Other information on acute toxicity
no data available

Skin corrosion/irritation
Skin - rabbit - Skin irritation - 24 h

Serious eye damage/eye irritation
Eyes - rabbit - Severe eye irritation - 24 h

Respiratory or skin sensitization
May cause allergic skin reaction.

Germ cell mutagenicity
no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

Teratogenicity
no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available

Aspiration hazard
no data available

Potential health effects

Inhalation May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion Toxic if swallowed.

Skin May be harmful if absorbed through skin. Causes skin burns.

Eyes Causes eye burns.

Signs and Symptoms of Exposure
burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

Synergistic effects
no data available

Additional Information
RTECS: Not available

12. ECOLOGICAL INFORMATION

Toxicity
Toxicity to fish
LC50 - Carassius auratus (goldfish) - 540 mg/l - 48 h

Persistence and degradability
no data available

Bioaccumulative potential
Does not bioaccumulate.

Mobility in soil

PBT and vPvB assessment
no data available

Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 2670 Class: 8 Packing group: II
Proper shipping name: Cyanuric chloride
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN number: 2670 Class: 8 Packing group: II EMS-No: F-A, S-B
Proper shipping name: CYANURIC CHLORIDE
Marine pollutant: No

IATA
UN number: 2670 Class: 8 Packing group: II
Proper shipping name: Cyanuric chloride

15. REGULATORY INFORMATION

OSHA Hazards
Target Organ Effect, Highly toxic by inhalation, Toxic by ingestion, Skin sensitiser, Corrosive

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4,6-Trichloro-1,3,5-triazine</td>
<td>108-77-0</td>
</tr>
</tbody>
</table>

New Jersey Right To Know Components

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4,6-Trichloro-1,3,5-triazine</td>
<td>108-77-0</td>
</tr>
</tbody>
</table>

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Further information
Copyright 2011 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.