1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Chloroform-d
Product Number : C8513
Brand : Sigma
Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO  63103
USA
Telephone : +1 800-325-5832
Fax : +1 800-325-5052
Emergency Phone # : (314) 776-6555

2. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : CCl3D
Molecular Weight : 120.39 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>865-49-6</td>
<td>212-742-4</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Emergency Overview
OSHA Hazards
  Harmful by ingestion.
  Irritant
  Carcinogen
Target Organs
  Kidney, Liver, Cardiovascular system., Central nervous system, Blood

HMIS Classification
  Health Hazard: 2
  Chronic Health Hazard: *
  Flammability: 0
  Physical hazards: 1

NFPA Rating
  Health Hazard: 2
  Fire: 0
  Reactivity Hazard: 1

Potential Health Effects
  Inhalation : May be harmful if inhaled. May cause respiratory tract irritation.
Skin: May be harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

Ingestion: Harmful if swallowed.

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
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Flammable properties
Flash point: no data available
Ignition temperature: no data available

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Environmental precautions
Do not let product enter drains.

Methods for cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Normal measures for preventive fire protection.

Storage
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Store under inert gas. Hygroscopic

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloroform-d</td>
<td>865-49-6</td>
<td>TWA</td>
<td>10 ppm</td>
<td>1996-05-18</td>
<td>US. American Conference</td>
</tr>
<tr>
<td>Remarks</td>
<td>49 mg/m³</td>
<td>9.78 mg/m³</td>
<td>1989-03-01 US. Department of Labor - Occupational Safety and Health Administration (OSHA) 29 CFR 1910.1000 Air Contaminants.</td>
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<tr>
<td>Personal protective equipment</td>
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<tr>
<td><strong>Respiratory protection</strong></td>
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<tr>
<td>Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi- purpose combination (US) or type AXBEK (EN 14387) 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).</td>
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<tr>
<td><strong>Hand protection</strong></td>
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<tr>
<td>Hand with gloves.</td>
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<tr>
<td><strong>Eye protection</strong></td>
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<tr>
<td>Safety glasses</td>
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<tr>
<td><strong>Skin and body protection</strong></td>
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<tr>
<td>Choose body protection according to the amount and concentration of the dangerous substance at the work place.</td>
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<tr>
<td><strong>Hygiene measures</strong></td>
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<tr>
<td>Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.</td>
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</tr>
</tbody>
</table>

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance**

- Form: liquid

**Safety data**

- pH: no data available
Melting point: -64 °C (-83 °F)  
Boiling point: 60.90 °C (141.62 °F) at 1,013 hPa (760 mmHg)  
Flash point: no data available  
Ignition temperature: no data available  
Lower explosion limit: no data available  
Upper explosion limit: no data available  
Density: 1.5000 g/cm³  
Water solubility: no data available

10. STABILITY AND REACTIVITY

Storage stability: Stable under recommended storage conditions.

Materials to avoid: Bases, Aluminum, Strong oxidizing agents, Magnesium, Sodium/sodium oxides, Lithium

Hazardous decomposition products: Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas, Phosgene gas, Carbon oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity: no data available

Irritation and corrosion: no data available

Sensitisation: no data available

Chronic exposure: This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification. The National Cancer Institute (NCI) has found clear evidence for carcinogenicity.

IARC: Group 2B - The agent (mixture) is possibly carcinogenic to humans. (Chloroform-d)
NTP: Reasonably anticipated to be human carcinogens. (Chloroform-d)
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.

Laboratory experiments have shown mutagenic effects.

Signs and Symptoms of Exposure

Vomiting, Gastrointestinal disturbance, Exposure to and/or consumption of alcohol may increase toxic effects. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Potential Health Effects

<table>
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Eyes May cause eye irritation.
Ingestion Harmful if swallowed.
Target Organs Kidney, Liver, Cardiovascular system., Central nervous system, Blood,

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)
no data available

Ecotoxicity effects
no data available

Further information on ecology
no data available

13. DISPOSAL CONSIDERATIONS

Product
Observe all federal, state, and local environmental regulations. 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: 1888  Class: 6.1  Packing group: III
Proper shipping name: Chloroform

IMDG
UN-Number: 1888  Class: 6.1  Packing group: III  EMS-No: F-A, S-A
Proper shipping name: CHLOROFORM
Marine pollutant: No

IATA
UN-Number: 1888  Class: 6.1  Packing group: III
Proper shipping name: Chloroform

15. REGULATORY INFORMATION

OSHA Hazards
Harmful by ingestion., Irritant, Carcinogen

TSCA Status
Not On TSCA Inventory

Chloroform-d CAS-No. 865-49-6

DSL Status
All components of this product are on the Canadian DSL list.

SARA 302 Components

Chloroform-d CAS-No. 865-49-6  Revision Date 1987-01-01

SARA 313 Components

CAS-No.  Revision Date
Chloroform-d  865-49-6  1987-01-01

SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

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Pennsylvania Right To Know Components

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New Jersey Right To Know Components

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California Prop. 65 Components

WARNING! This product contains a chemical known in the State of California to cause cancer.

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<tbody>
<tr>
<td>865-49-6</td>
<td>1992-11-09</td>
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</table>

16. OTHER INFORMATION

Further information
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