



SIGMA-ALDRICH

## Material Safety Data Sheet

Date Printed: 04/03/2007  
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Version 1.70

### Section 1 - Product and Company Information

**Product Name** Chloroform-d, 99.8 atom % D  
**Product Number** 225789  
**Brand** Aldrich Chemical

**Company** Sigma-Aldrich  
**Address** 3050 Spruce Street  
**City, State, Zip, Country** SAINT LOUIS, MO 63103 US  
**Technical Phone:** 800-325-5832  
**Fax:** 800-325-5052  
**Emergency Phone:** 314-776-6556

### Section 2 - Composition/Information on Ingredient

<u>Substance Name</u>	<u>CAS #</u>	<u>SARA 313</u>	<u>EC no</u>	<u>Annex I Index Number</u>
CHLOROFORM-D, * ATOM% D	865-49-6	Yes	212-742-4	602-006-00-4
<b>Formula</b>	CCl3D			
<b>Synonyms</b>				

### Section 3 - Hazards Identification

#### Emergency Overview

Harmful.  
Harmful if swallowed. Limited evidence of a carcinogenic effect. Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.  
Probable Carcinogen (US). Possible mutagen. Target organ(s): Liver. Cardiovascular system. Calif. Prop. 65 carcinogen.

#### HMIS Rating

Health: 2\* Flammability: 0 Reactivity: 1

#### NFPA Rating

Health: 2 Flammability: 0 Reactivity: 1

\*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

### Section 4 - First Aid Measures

#### Oral Exposure

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

#### Inhalation Exposure

If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

#### Dermal Exposure

In case of contact, immediately wash skin with soap and copious amounts of water.

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#### Eye Exposure

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

#### Information for Physician

Contamination of the eyes should be treated by immediate and prolonged irrigation with copious amounts of water.

### Section 5 - Fire Fighting Measures

**Autoignition Temp:** N/A

#### Extinguishing Media Suitable

Noncombustible. Use extinguishing media appropriate to surrounding fire conditions.

#### Firefighting

##### Protective Equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

##### Specific Hazard(s)

Emits toxic fumes under fire conditions.

### Section 6 - Accidental Release Measures

#### Procedure to be Followed in Case of Leak or Spill

Evacuate area.

#### Procedure(s) of Personal Precaution(s)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves. Wear disposable coveralls and discard them after use.

#### Methods for Cleaning Up

Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

### Section 7 - Handling and Storage

#### Handling

##### User Exposure

Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

#### Storage

##### Suitable

Keep tightly closed.

#### Special Requirements

Store under inert gas. Hygroscopic.

### Section 8 - Exposure Controls / PPE

#### Engineering Controls

Use only in a chemical fume hood. Safety shower and eye bath.

#### Personal Protective Equipment

##### Respiratory

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). 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.

##### Hand

Compatible chemical-resistant gloves.

**Eye**  
Chemical safety goggles.

**General Hygiene Measures**  
Wash contaminated clothing before reuse. Wash thoroughly after handling.

## Section 9 - Physical/Chemical Properties

Appearance	Color	Form
	Colorless	Clear liquid

Molecular Weight: 120.39 AMU

Property	Value	At Temperature or Pressure
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pH	N/A	
BP/BP Range	60.9 °C	760 mmHg
MP/MP Range	-64 °C	
Freezing Point	N/A	
Vapor Pressure	160 mmHg	20 °C
Vapor Density	4.1 g/l	
Saturated Vapor Conc.	N/A	
SG/Density	1.48 g/cm <sup>3</sup>	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point °F	N/A	
Flash Point °C	N/A	

Explosion Limits N/A

Flammability N/A  
Autoignition Temp N/A  
Refractive Index 1.444  
Solubility N/A

N/A = not available

## Section 10 - Stability and Reactivity

**Stability**  
Stable  
Stable.

**Conditions of Instability**  
May decompose on exposure to light.

**Materials to Avoid**  
Strong oxidizing agents, Strong bases, Magnesium, Sodium, Lithium.

**Hazardous Decomposition Products**  
**Hazardous Decomposition Products**  
Carbon monoxide, Carbon dioxide, Phosgene gas, Chlorine.

**Stabilizers Present**  
Contains 0.03% trimethylsilane (TMS).

**Hazardous Polymerization**  
**Hazardous Polymerization**  
Will not occur.

## Section 11 - Toxicological Information

### Route of Exposure

#### Skin Contact

Causes skin irritation.

#### Skin Absorption

Skin absorption may occur.

#### Eye Contact

Causes eye irritation.

#### Inhalation

May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

#### Ingestion

Harmful if swallowed.

### Target Organ(s) or System(s)

Cardiovascular system. Central nervous system. Blood. Liver. Kidneys.

### Signs and Symptoms of Exposure

Exposure can cause: Vomiting. Gastrointestinal disturbances. 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.

### Conditions Aggravated by Exposure

May cause nervous system disturbances.

**RETECS Number:** N/A

### Chronic Exposure - Carcinogen

Result: 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.

### IRIS/EPA Carcinogen List

Rating	Species	Route
Group B2	Rat, mouse	Gavage

### Chronic Exposure - Mutagen

Result: Laboratory experiments have shown mutagenic effects.

## Section 12 - Ecological Information

No data available.

## Section 13 - Disposal Considerations

### Appropriate Method of Disposal of Substance or Preparation

Contact a licensed professional waste disposal service to dispose of this material.

Observe all federal, state, and local environmental regulations.

(DN) Requires special label: "Contains a substance which is regulated by Danish work environmental law due to the risk of carcinogenic properties."

## Section 14 - Transport Information

### DOT

**Proper Shipping Name:** Chloroform

**UN#:** 1888

**Class:** 6.1

**Packing Group:** Packing Group III  
**Hazard Label:** Toxic Substance  
**PIH:** Not PIH

**IATA**

**Proper Shipping Name:** Chloroform  
**IATA UN Number:** 1888  
**Hazard Class:** 6.1  
**Packing Group:** III

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**Section 15 - Regulatory Information**

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**EU Directives Classification**

**Symbol of Danger:** Xn

**Indication of Danger**

Harmful.

**Risk Statements**

R: 22 38 40 48/20/22

Harmful if swallowed. Irritating to skin. Limited evidence of a carcinogenic effect. Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

**Safety Statements**

S: 36/37

Wear suitable protective clothing and gloves.

**US Classification and Label Text**

**Indication of Danger**

Harmful.

**Risk Statements**

Harmful if swallowed. Limited evidence of a carcinogenic effect. Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

**Safety Statements**

Wear suitable protective clothing and gloves.

**US Statements**

Probable Carcinogen (US). Possible mutagen. Target organ(s): Liver. Cardiovascular system. Calif. Prop. 65 carcinogen.

**United States Regulatory Information**

**SARA Listed:** Yes

**Deminimis:** 0.1 %

**Notes:** This product is subject to SARA section 313 reporting requirements.

**United States - State Regulatory Information**

**California Prop - 65**

This product is or contains chemical(s) known to the state of California to cause cancer.

**Canada Regulatory Information**

**WHMIS Classification**

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

**DSL:** Yes

**NDSL:** No

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**Section 16 - Other Information**

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**Disclaimer**

For R&D use only. Not for drug, household or other uses.

**Warranty**

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 Inc., 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. Copyright 2007 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.