

Material Safety Data Sheet

Version 4.0

Revision Date 03/14/2010

Print Date 07/19/2010

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 1-Chloro-1,1-difluoroethane

Product Number : 295256

Brand : Aldrich

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

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2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Flammable gas, Compressed Gas

GHS Label elements, including precautionary statements

Pictogram



Signal word Warning

Hazard statement(s)

H280 Contains gas under pressure; may explode if heated.

Precautionary statement(s)

P410 + P403 Protect from sunlight. Store in a well-ventilated place.

HMIS Classification

Health hazard: 0

Flammability: 4

Physical hazards: 3

NFPA Rating

Health hazard: 0

Fire: 4

Reactivity Hazard: 0

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 May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : HCFC-142b

Formula : C₂H₃ClF₂

Molecular Weight : 100.50 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
1-Chloro-1,1-difluoroethane			
75-68-3	200-891-8	-	-

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

Flush eyes with water as a precaution.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

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.

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Wipe up with absorbent material (e.g. cloth, fleece).

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment.

Conditions for safe storage

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

Contents under pressure.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
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1-Chloro-1,1-difluoroethane	75-68-3	TWA	1,000 ppm	2008-01-01	USA. Workplace Environmental Exposure Levels (WEEL)
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Personal protective equipment

Respiratory protection

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).

Hand protection

For prolonged or repeated contact use protective gloves.

Eye protection

Face shield and safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form Compressed gas

Safety data

pH	no data available
Melting point	-131 °C (-204 °F) - lit.
Boiling point	-10 °C (14 °F) - lit.
Flash point	no data available
Ignition temperature	632 °C (1,170 °F) -
Lower explosion limit	6.2 %(V)
Upper explosion limit	18 %(V)
Vapour pressure	2,928 hPa (2,196 mmHg) at 21 °C (70 °F)
Water solubility	no data available
Relative vapour density	3.47 - (Air = 1.0)

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

Heat, flames and sparks.

Materials to avoid

Strong oxidizing agents Strong oxidizing agents, Magnesium, Aluminum, and its alloys, Brass, Steel (all types and surface treatments)

Hazardous decomposition products

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

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LC50 Inhalation - rat - 4 h - 2,050,000 mg/m3

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

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

Specific target organ toxicity - single exposure (GHS)

no data available

Specific target organ toxicity - repeated exposure (GHS)

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion	May be harmful if swallowed.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated., Acts as a simple asphyxiant by displacing air., Dizziness, Disorientation, Headache, excitement, Central nervous system depression

Additional Information

RTECS: KH7650000

12. ECOLOGICAL INFORMATION**Toxicity**

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Dangerous for the ozone layer.

13. DISPOSAL CONSIDERATIONS

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN-Number: 2517 Class: 2.1

Proper shipping name: 1-Chloro-1,1-difluoroethane

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN-Number: 2517 Class: 2.1

EMS-No: F-D, S-U

Proper shipping name: 1-CHLORO-1,1-DIFLUOROETHANE

Marine pollutant: No

IATA

UN-Number: 2517 Class: 2.1

Proper shipping name: 1-Chloro-1,1-difluoroethane

IATA Passenger: Not permitted for transport

15. REGULATORY INFORMATION

OSHA Hazards

Flammable gas, Compressed Gas

DSL Status

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

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

Fire Hazard, Sudden Release of Pressure Hazard

Massachusetts Right To Know Components

1-Chloro-1,1-difluoroethane

CAS-No.
75-68-3

Revision Date
2007-07-01

Pennsylvania Right To Know Components

1-Chloro-1,1-difluoroethane

CAS-No.
75-68-3

Revision Date
2007-07-01

New Jersey Right To Know Components

1-Chloro-1,1-difluoroethane

CAS-No.
75-68-3

Revision Date
2007-07-01

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**

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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.