

SAFETY DATA SHEET

according to Regulation (EU) No. 1907/2006
Version 3.1 Revision Date 08.02.2008
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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product name : Dichloromethane

Product Number : 34856
Brand : Sigma-Aldrich

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2. HAZARDS IDENTIFICATION

Risk advice to man and the environment
Limited evidence of a carcinogenic effect.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Methylene chloride

Formula : CH₂Cl₂
Molecular Weight : 84.93 g/mol

CAS-No.	EC-No.	Index-No.	Classification	Concentration
Methylene chloride				
75-09-2	200-838-9	602-004-00-3	Xn, Carc.Cat.3, R40	>= 99.9 %

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

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

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 inhalation of vapour or mist.

Normal measures for preventive fire protection.

Storage

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

Heat sensitive. Store under inert gas.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
Methylene chloride	75-09-2	STEL	300 ppm 1,060 mg/m ³	2001-12-01	UK. Health and Safety Commission, EH 40/2005, Workplace exposure limits
Remarks	HSC/E plan to review the limit values for this substance				
		TWA	100 ppm 350 mg/m ³	2001-12-01	UK. Health and Safety Commission, EH 40/2005, Workplace exposure limits
	HSC/E plan to review the limit values for this substance				

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

Handle with gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.

Eye protection

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	liquid
Colour	colourless

Safety data

pH	no data available
Melting point	-97.0 °C
Boiling point	40.0 °C
Flash point	no data available
Ignition temperature	556.1 °C -
Lower explosion limit	12 %(V)
Upper explosion limit	19 %(V)
Vapour pressure	470.8 hPa at 20.0 °C 1,687.3 hPa at 55.0 °C
Density	1.32 g/cm ³
Water solubility	slightly soluble
Partition coefficient: n-octanol/water	log Pow: 1.25

10. STABILITY AND REACTIVITY**Storage stability**

Stable under recommended storage conditions.

Materials to avoid

Alkali metals, Aluminum, Strong oxidizing agents, Bases

Hazardous decomposition products

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

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

LD50 Oral - rat - 1,600 mg/kg
Remarks: Behavioral:Ataxia.

LC50 Inhalation - rat - 52,000 mg/m³

Irritation and corrosion

Skin - rabbit - Skin irritation - 24 h

Eyes - rabbit - Mild eye irritation - 24 h

Sensitisation

no data available

Chronic exposure

Carcinogenicity - rat - Inhalation

Tumorigenic: Carcinogenic by RTECS criteria. Endocrine: Tumors.

This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

IARC: Group 2B - The agent (mixture) is possibly carcinogenic to humans. (Methylene chloride)

Genotoxicity in vivo - rat - Oral

DNA damage

Signs and Symptoms of Exposure

Dichloromethane is metabolized in the body producing carbon monoxide which increases and sustains carboxyhemoglobin levels in the blood, reducing the oxygen-carrying capacity of the blood., Acts as a simple asphyxiant by displacing air., anesthetic effects, Difficulty in breathing, Headache, Dizziness, Prolonged or repeated contact with skin may cause:, defatting, Dermatitis, Contact with eyes can cause:, Redness, Blurred vision, Provokes tears., Effects due to ingestion may include:, Gastrointestinal discomfort, Central nervous system depression, Paresthesia., Drowsiness, Convulsions, Conjunctivitis., Pulmonary edema. Effects may be delayed., Irregular breathing., Stomach/intestinal disorders, Nausea, Vomiting, Increased liver enzymes., Weakness, Heavy or prolonged skin exposure may result in the absorption of harmful amounts of material., Abdominal pain

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.
Target Organs	Liver, pancreas, Blood,

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

no data available

Ecotoxicity effects

Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) - 193.00 mg/l - 96 h NOEC - Cyprinodon variegatus (sheepshead minnow) - 130 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates.	EC50 - Daphnia magna (Water flea) - 1,682.00 mg/l - 48 h

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

ADR/RID

UN-Number: 1593 Class: 6.1 Packing group: III
Proper shipping name: DICHLOROMETHANE

IMDG

UN-Number: 1593 Class: 6.1 Packing group: III EMS-No: F-A, S-A
Proper shipping name: DICHLOROMETHANE
Marine pollutant: No

IATA

UN-Number: 1593 Class: 6.1 Packing group: III
Proper shipping name: Dichloromethane

15. REGULATORY INFORMATION**Labelling according to EC Directives**

EC Label

Hazard symbols

Xn Harmful

R-phrase(s)

R40 Limited evidence of a carcinogenic effect.

S-phrase(s)

S23 Do not breathe gas/fumes/vapour/spray.

S24/25 Avoid contact with skin and eyes.

S36/37 Wear suitable protective clothing and gloves.

16. OTHER INFORMATION**Further information**

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