

## SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 5.2 Revision Date 15.02.2013

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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifiers**

Product name : Dichloromethane

Product Number : 66740

Brand : Fluka

Index-No. : 602-004-00-3

REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

CAS-No. : 75-09-2

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified uses : Laboratory chemicals, Manufacture of substances

**1.3 Details of the supplier of the safety data sheet**

Company : Sigma-Aldrich Chemie GmbH  
Industriestrasse 25  
CH-9471 BUCHS

Telephone : +41 81-755-2511

Fax : +41 81-756-5449

E-mail address : eurtechserv@sial.com

**1.4 Emergency telephone number**

Emergency Phone # : +41 81-755-2255  
145(CH)  
+41 44-251-5151 (Tox-Zentrum)

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

Carcinogenicity (Category 2), H351

For the full text of the H-Statements mentioned in this Section, see Section 16.

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

Xn Harmful R40

For the full text of the R-phrases mentioned in this Section, see Section 16.

**2.2 Label elements****Labelling according Regulation (EC) No 1272/2008**

Pictogram



Signal word : Warning

Hazard statement(s)  
H351 : Suspected of causing cancer.

Precautionary statement(s)  
P281 Use personal protective equipment as required.

Supplemental Hazard Statements none

**2.3 Other hazards** - none

**SECTION 3: Composition/information on ingredients**

**3.1 Substances**

Synonyms : Methylene chloride

Formula : CH<sub>2</sub>Cl<sub>2</sub>

Molecular Weight : 84,93 g/mol

CAS-No. : 75-09-2

EC-No. : 200-838-9

Index-No. : 602-004-00-3

**Hazardous ingredients according to Regulation (EC) No 1272/2008**

Component	Classification	Concentration
<b>Methylene chloride</b>		
	Carc. 2; H351	-
<b>2-Methyl-2-butene</b>		
	Flam. Liq. 2; Acute Tox. 4; Skin Irrit. 2; Muta. 2; STOT SE 3; Asp. Tox. 1; Aquatic Chronic 2; H225, H302, H304, H315, H336, H341, H411	0,25 - 1 %

**Hazardous ingredients according to Directive 1999/45/EC**

Component	Classification	Concentration
<b>Methylene chloride</b>		
	Xn, Carc.Cat.3, R40	-
<b>2-Methyl-2-butene</b>		
	F, Xn, N, R11 - R22 - R38 - R65 - R67 - R68 - R51/53	< 1 %

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

**SECTION 4: First aid measures**

**4.1 Description of 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.

**4.2 Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

- 4.3 Indication of any immediate medical attention and special treatment needed**  
no data available

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## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

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

### **5.2 Special hazards arising from the substance or mixture**

Carbon oxides, Hydrogen chloride gas

### **5.3 Advice for firefighters**

Wear self contained breathing apparatus for fire fighting if necessary.

### **5.4 Further information**

no data available

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## **SECTION 6: Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

### **6.2 Environmental precautions**

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

### **6.3 Methods and materials for containment and cleaning up**

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

### **6.4 Reference to other sections**

For disposal see section 13.

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## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. For precautions see section 2.2.

### **7.2 Conditions for safe storage, including any incompatibilities**

Store in cool place. 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.

Heat sensitive. Store under inert gas.

### **7.3 Specific end use(s)**

A part from the uses mentioned in section 1.2 no other specific uses are stipulated

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## **SECTION 8: Exposure controls/personal protection**

### **8.1 Control parameters**

#### **Components with workplace control parameters**

### **8.2 Exposure controls**

#### **Appropriate engineering controls**

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

#### **Personal protective equipment**

##### **Eye/face 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 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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Splash contact

Material: Fluorinated rubber

Minimum layer thickness: 0,7 mm

Break through time: 148 min

Material tested: Vitoject® (KCL 890 / Aldrich Z677698, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

### **Body Protection**

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### **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).

### **Control of environmental exposure**

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

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## **SECTION 9: Physical and chemical properties**

### **9.1 Information on basic physical and chemical properties**

- |   |  |
|---|--|
| a) Appearance                                   | Form: liquid<br>Colour: colourless                               |
| b) Odour  | no data available  |
| c) Odour Threshold                              | no data available  |
| d) pH   | no data available  |
| e) Melting point/freezing point                 | Melting point/range: -97 °C                                      |
| f) Initial boiling point and boiling range      | 39,8 - 40 °C   |
| g) Flash point                                  | no data available  |
| h) Evaporation rate                             | 0,71   |
| i) Flammability (solid, gas)                    | no data available  |
| j) Upper/lower flammability or explosive limits | Upper explosion limit: 19 %(V)<br>Lower explosion limit: 12 %(V) |
| k) Vapour pressure                              | 470,9 hPa at 20,0 °C   |
| l) Vapour density                               | 2,93 - (Air = 1.0)   |
| m) Relative density                             | 1,325 g/mL at 25 °C  |

- |    |  |                      |
|----|--|----------------------|
| n) | Water solubility                       | slightly soluble     |
| o) | Partition coefficient: n-octanol/water | log Pow: 1,25        |
| p) | Auto-ignition temperature              | 556,1 °C<br>662,0 °C |
| q) | Decomposition temperature              | no data available    |
| r) | Viscosity                              | no data available    |
| s) | Explosive properties                   | no data available    |
| t) | Oxidizing properties                   | no data available    |

## 9.2 Other safety information

Relative vapour density 2,93 - (Air = 1.0)

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

Contains the following stabiliser(s):

2-Methyl-2-butene (0,0025 )

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

Heat, flames and sparks. Exposure to sunlight.

### 10.5 Incompatible materials

Alkali metals, Aluminum, Strong oxidizing agents, Bases, Amines, Magnesium, Strong acids and strong bases, Vinyl compounds

### 10.6 Hazardous decomposition products

Other decomposition products - no data available

In the event of fire: see section 5

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

no data available

LD50 Oral - rat - 1.600 mg/kg

Remarks: Behavioral:Ataxia.

LD50 Oral - rat - 985 mg/kg

Remarks: Behavioral:Ataxia.

LD50 Oral - rabbit - 2.000 mg/kg

LD50 Oral - dog - 3.000 mg/kg

LC50 Inhalation - rat - 52.000 mg/m<sup>3</sup>

#### Skin corrosion/irritation

Skin - rabbit

Result: Irritating to skin. - 24 h

(Draize Test)

#### Serious eye damage/eye irritation

Eyes - rabbit

Result: Irritating to eyes. - 24 h

(Draize Test)

**Respiratory or skin sensitisation**

no data available

**Germ cell mutagenicity**

rat

DNA damage

**Carcinogenicity**

Carcinogenicity - rat - Inhalation

Tumorigenic: Carcinogenic by RTECS criteria. Endocrine: Tumors.

Limited evidence of carcinogenicity in animal studies

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Methylene chloride)

**Reproductive toxicity**

no data available

**Specific target organ toxicity - single exposure**

no data available

**Specific target organ toxicity - repeated exposure**

no data available

**Aspiration hazard**

no data available

**Additional Information**

RTECS: PA8050000

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

Blood - Irregularities - Based on Human Evidence

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**SECTION 12: Ecological information**

**12.1 Toxicity**

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

**12.2 Persistence and degradability**

no data available

**12.3 Bioaccumulative potential**

no data available

**12.4 Mobility in soil**

no data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

## 12.6 Other adverse effects

no data available

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

#### Contaminated packaging

Dispose of as unused product.

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## SECTION 14: Transport information

### 14.1 UN number

ADR/RID: 1593

IMDG: 1593

IATA: 1593

### 14.2 UN proper shipping name

ADR/RID: DICHLOROMETHANE

IMDG: DICHLOROMETHANE

IATA: Dichloromethane

### 14.3 Transport hazard class(es)

ADR/RID: 6.1

IMDG: 6.1

IATA: 6.1

### 14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

### 14.5 Environmental hazards

ADR/RID: yes

IMDG Marine pollutant: yes

IATA: no

### 14.6 Special precautions for user

no data available

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## SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

no data available

### 15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

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## SECTION 16: Other information

### Full text of H-Statements referred to under sections 2 and 3.

Acute Tox.	Acute toxicity
Aquatic Chronic	Chronic aquatic toxicity
Asp. Tox.	Aspiration hazard
Carc.	Carcinogenicity
Flam. Liq.	Flammable liquids
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H411	Toxic to aquatic life with long lasting effects.
Muta.	Germ cell mutagenicity
Skin Irrit.	Skin irritation
STOT SE	Specific target organ toxicity - single exposure

### Full text of R-phrases referred to under sections 2 and 3

F	Highly flammable
R11	Highly flammable.
R22	Harmful if swallowed.
R38	Irritating to skin.
N	Dangerous for the environment
Xn	Harmful
R40	Limited evidence of a carcinogenic effect.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.
R67	Vapours may cause drowsiness and dizziness.
R68	Possible risk of irreversible effects.

**Further information**

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