

## Chemical Safety Data Sheet MSDS / SDS

## Chloromethane

Revision Date:2026-03-20 Revision Number:1

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

## Product identifier

Product name : Chloromethane  
CBnumber : CB9673584  
CAS : 74-87-3  
EINECS Number : 200-817-4  
Synonyms : METHYL CHLORIDE;CH<sub>3</sub>Cl

## Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

## Company Identification

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 010-86108875

## SECTION 2: Hazards identification

## GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word

Danger

## Precautionary statements

P502 Refer to manufacturer/supplier for information on recovery/recycling  
P410+P403 Protect from sunlight. Store in a well-ventilated place.  
P308+P313 IF exposed or concerned: Get medical advice/attention.  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.  
P202 Do not handle until all safety precautions have been read and understood.

## Hazard statements

H420 Harms public health and the environment by destroying ozone in the upper atmosphere  
H373 May cause damage to organs through prolonged or repeated exposure  
H351 Suspected of causing cancer

H280 Contains gas under pressure; may explode if heated

H221 Flammable gas

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## SECTION 3: Composition/information on ingredients

### Substance

Product name	: Chloromethane
Synonyms	: METHYL CHLORIDE;CH <sub>3</sub> Cl
CAS	: 74-87-3
EC number	: 200-817-4
MF	: CH <sub>3</sub> Cl
MW	: 50.49

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## SECTION 4: First aid measures

### If inhaled

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician.

### In case of skin contact

Take off all contaminated clothing immediately. If on skin, rinse well with water. Call a POISON CENTER or doctor/ physician.

### In case of eye contact

Rinse with plenty of water. If easy to do, remove contact lens, if worn. Call a POISON CENTER or doctor/ physician.

### If swallowed

Call a POISON CENTER or doctor/ physician. Rinse mouth.

### Most important symptoms and effects, both acute and delayed

None known.

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## SECTION 5: Firefighting measures

### Suitable extinguishing media

Dry powder, Foam, Water spray, Carbon dioxide (CO<sub>2</sub>)

### Specific hazards during fire fighting

No information available.

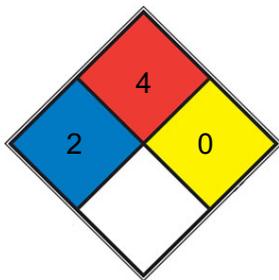
### Specific extinguishing methods

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Immediately evacuate personnel to safe areas. Remove undamaged containers from fire area if it is safe to do so.

## Special protective equipment for fire-fighters

Use personal protective equipment.

### NFPA 704



<input type="checkbox"/>	HEALTH	2	Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. <a href="#">diethyl ether</a> , ammonium phosphate, iodine)
<input type="checkbox"/>	FIRE	4	Will rapidly or completely vaporize at normal atmospheric pressure and temperature, or is readily dispersed in air and will burn readily. Includes pyrophoric substances. Flash point below room temperature at 22.8 °C (73 °F). (e.g. acetylene, propane, <a href="#">hydrogen gas</a> )
<input type="checkbox"/>	REACT	0	Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, <a href="#">N<sub>2</sub></a> )
<input type="checkbox"/>	SPEC.		
<input type="checkbox"/>	HAZ.		

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## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Wear suitable protective equipment. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.

### Environmental precautions

Prevent product from entering drains.

### Methods and materials for containment and cleaning up

Collect as much of the spill as possible with a suitable absorbent material.

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## SECTION 7: Handling and storage

### Handling

#### Technical measures

Prevent generation of vapor or mist. Take precautionary measures against static discharge. Use explosion-proof equipment.

#### Local/Total ventilation

Ensure adequate ventilation. Handle product only in closed system or provide appropriate exhaust ventilation at machinery. Use a local exhaust ventilation.

#### Advice on safe handling

Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not subject to grinding, shock or friction. Wash hands and face thoroughly after handling.

#### Avoidance of contact

Oxidizing agents

#### Storage

##### Conditions for safe storage

Keep container tightly closed. Store in a refrigerator. Keep in a well-ventilated place. Use explosion-proof equipment. Keep under inert gas. Store locked up.

## SECTION 8: Exposure controls/personal protection

### Ingredients with workplace control parameters

Components	CAS RN	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis	
Tetrahydrofuran	109-99-9	PC-TWA	300 mg/m <sup>3</sup>	CN OEL	
		TWA	50 ppm	ACGIH	
		STEL	100 ppm	ACGIH	
Methyl Chloride	74-87-3	PC-TWA	60 mg/m <sup>3</sup>	CN OEL	
		Further information: Skin			
		PC-STEL	120 mg/m <sup>3</sup>	CN OEL	
		Further information: Skin			
		TWA	50 ppm	ACGIH	
		STEL	100 ppm	ACGIH	

Components CAS RN Value type Control parameters Basis (Form of exposure / Permissible concentration)

Tetrahydrofuran 109-99-9 PC-TWA 300 mg/m<sup>3</sup> CN OEL

TWA 50 ppm ACGIH

STEL 100 ppm ACGIH

Methyl Chloride 74-87-3 PC-TWA 60 mg/m<sup>3</sup> CN OEL

#### Further information

Skin

PC-STEL 120 mg/m<sup>3</sup> CN OEL

#### Further information

Skin

TWA 50 ppm ACGIH

STEL 100 ppm ACGIH

### Engineering measures

Install a closed system or local exhaust.

Also install safety shower and eye bath.

### Personal protective equipment

#### Respiratory protection

Gas mask

Self-contained breathing apparatus

**Eye/face protection**

Safety glasses

Safety goggles

Face-shield

**Skin and body protection**

Impervious protective clothing

**Hand protection**

Impervious gloves \*Use personal protective equipment(PPE) approved under appropriate government standards and follow local and national regulations.

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

liquid

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**Color**

colorless

**Odor**

faint sweet ethereal odor

**Odor Threshold**

No data available

**pH**

No data available

**Melting point/freezing point**

No data available

**Boiling point/boiling range**

-24.2 °C(lit.)

**Flash point**

<-30 °F

**Evaporation rate**

No data available

**Flammability**

No data available

**Upper explosion limit / Upper flammability limit**

19%

**Lower explosion limit / Lower flammability limit**

19%

**Vapor pressure**

3796 mm Hg ( 20 °C)

**Solubility(ies)**

water: soluble 5.32g/L at 25°C

**Water solubility**

5.347g/L(24.9 °C)

**Solubility in other solvents**

water: soluble 5.32g/L at 25°C

**Partition coefficient: n-octanol/water**

No data available

**Autoignition temperature**

No data available

**Decomposition temperature**

No data available

**Viscosity**

**Viscosity, dynamic**

No data available

**Viscosity, kinematic**

No data available

**Molecular weight**

50.49 g/mol

**Density and/or relative density**

0.915 g/mL at 25 °C(lit.)

**Vapour density**

1.74 (vs air)

**Physical state**

Colorless gas

**Henry's Law Constant**

In seawater: 5.22 at 5 °C, 6.36 at 10 °C, 8.72 at 15 °C, 9.35 at 20 °C, 11.20 at 25 °C (Moore, 2000)

### **Dielectric constant**

12.6 (-20°C)

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## SECTION 10: Stability and reactivity

### **Reactivity**

No data available

### **Chemical stability**

Stable under normal conditions.

### **Possibility of hazardous reactions**

None under normal processing.

### **Conditions to avoid**

Electrical spark Open flame Electrostatic discharge Exposure to air.

### **Incompatible materials**

Oxidizing agents

### **Hazardous decomposition products**

Carbon monoxide, Carbon dioxide (CO<sub>2</sub>), Hydrogen chloride gas

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## SECTION 11: Toxicological information

### **Acute toxicity**

#### **Product**

#### **Acute oral toxicity**

Assessment: The component/mixture is moderately toxic after single ingestion.

#### **Acute inhalation toxicity**

Acute toxicity estimate: > 40 mg/l Exposure time: 4 h Test atmosphere: vapor Method: Calculation method

#### **Components**

#### **Tetrahydrofuran**

#### **Acute oral toxicity**

LD50 (Rat): 1,650 mg/kg Assessment: The component/mixture is moderately toxic after single ingestion.

### **Acute inhalation toxicity**

LC50 (Rat): 21000 ppm Exposure time: 3 h Test atmosphere: gas Assessment: The substance or mixture has no acute inhalation toxicity

### **Acute toxicity (other routes of administration)**

LD50 (Rat): 2,900 mg/kg Application Route: Intraperitoneal injection

### **Methyl Chloride**

#### **Acute oral toxicity**

Assessment: The component/mixture is moderately toxic after single ingestion.

#### **Acute inhalation toxicity**

Assessment: The component/mixture is moderately toxic after short term inhalation.

#### **Skin corrosion/irritation**

#### **Product**

#### **Result**

Skin irritation

#### **Components**

#### **Tetrahydrofuran**

#### **Result**

Skin irritation

#### **Serious eye damage/eye irritation**

#### **Product**

#### **Result**

Eye irritation

#### **Components**

#### **Tetrahydrofuran**

#### **Result**

Eye irritation

#### **Respiratory or skin sensitization**

Classified based on available data. For more details, see section 2.

#### **Germ cell mutagenicity**

## **Product**

### **Germ cell mutagenicity - Assessment**

Suspected of inducing heritable mutations in the germ cells of humans.

### **Components**

#### **Methyl Chloride**

### **Germ cell mutagenicity - Assessment**

Suspected of inducing heritable mutations in the germ cells of humans.

### **Carcinogenicity**

## **Product**

### **Carcinogenicity - Assessment**

Suspected human carcinogens

### **Components**

#### **Tetrahydrofuran**

### **Carcinogenicity - Assessment**

Suspected human carcinogens

#### **Methyl Chloride**

### **Carcinogenicity - Assessment**

Suspected human carcinogens

### **Reproductive toxicity**

## **Product**

### **Reproductive toxicity - Assessment**

Presumed human reproductive toxicant

### **Components**

#### **Methyl Chloride**

### **Reproductive toxicity - Assessment**

Presumed human reproductive toxicant

### **STOT-single exposure**

## **Product**

**Assessment**

May cause respiratory irritation.

**Target Organs**

Liver, Nervous system, Cardio-vascular system, Kidney

**Assessment**

May cause damage to organs.

**Components****Tetrahydrofuran****Assessment**

May cause respiratory irritation.

**Target Organs**

Nervous system

**Assessment**

May cause damage to organs.

**Methyl Chloride****Assessment**

May cause drowsiness or dizziness.

**Target Organs**

Liver, Nervous system, Cardio-vascular system, Kidney

**Assessment**

Causes damage to organs.

**STOT-repeated exposure****Product****Target Organs**

Liver, Nervous system, Kidney

**Assessment**

Causes damage to organs through prolonged or repeated exposure.

**Target Organs**

Central nervous system

## **Assessment**

May cause damage to organs through prolonged or repeated exposure.

## **Components**

### **Tetrahydrofuran**

#### **Target Organs**

Liver, Nervous system, Kidney

## **Assessment**

Causes damage to organs through prolonged or repeated exposure.

## **Methyl Chloride**

#### **Target Organs**

Liver, Kidney, Central nervous system

## **Assessment**

Causes damage to organs through prolonged or repeated exposure.

#### **Target Organs**

Systemic toxicity

## **Assessment**

May cause damage to organs through prolonged or repeated exposure.

### **Repeated dose toxicity**

Classified based on available data. For more details, see section 2.

### **Aspiration toxicity**

Classified based on available data. For more details, see section 2.

### **RTECS No.**

LU5950000 (Tetrahydrofuran)

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## SECTION 12: Ecological information

### **Ecotoxicity**

#### **Components:**

##### **Tetrahydrofuran:**

#### **Toxicity to fish**

LC50 (Pimephales promelas (fathead minnow)): 2,160 mg/l Exposure time: 96 h

#### **Toxicity to daphnia and other aquatic invertebrates**

EC50 (Daphnia magna (Water flea)): 5,930 mg/l Exposure time: 24 h

#### **Persistence and degradability**

##### **Components:**

##### **Tetrahydrofuran:**

##### **Biodegradability**

Biochemical oxygen demand Result: Readily biodegradable. Biodegradation: 100 %

##### **Bioaccumulative potential**

##### **Components:**

##### **Tetrahydrofuran:**

octanol/water

##### **Partition coefficient: octanol/water**

0.46

##### **Mobility in soil**

##### **Components:**

##### **Tetrahydrofuran:**

tal compartments

##### **Distribution among environmental compartments**

Koc: 18 - 23

##### **Other adverse effects**

No data available

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## SECTION 13: Disposal considerations

### **Disposal methods**

#### **Waste from residues**

Disposal in accordance with local and national regulations. Take precautions against ignition or explode. Entrust disposal to a licensed waste disposal company.

#### **Contaminated packaging**

Disposal in accordance with local and national regulations. Before disposal of used container, remove contents completely.

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## SECTION 14: Transport information

### **International Regulations**

## **IATA-DGR**

### **UN/ID No.**

UN 1993

### **Proper shipping name**

Flammable liquid, n.o.s.

### **Class**

3

### **Packing group**

II

## **IMDG-Code**

### **UN number**

UN 1993

### **Proper shipping name**

FLAMMABLE LIQUID, N.O.S.

### **Class**

3

### **Packing group**

II

### **EmS Code**

F-E, S-E

## **Domestic regulation**

### **GB 6944/12268**

### **UN number**

UN 1993

### **Proper shipping name**

FLAMMABLE LIQUID, N.O.S.

### **Class**

3

### **Packing group**

II

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## **SECTION 15: Regulatory information**

### **Regulations on Safety Management of Hazardous Chemicals**

#### **Catalogue of Hazardous Chemicals**

Listed

**The ingredients of this product are reported in the following inventories**

**TCSI**

On the inventory, or in compliance with the inventory

**TSCA**

All substances listed as active on the TSCA inventory

**AIC**

On the inventory, or in compliance with the inventory

**DSL**

All components of this product are on the Canadian DSL

**ENCS**

On the inventory, or in compliance with the inventory

**ISHL**

On the inventory, or in compliance with the inventory

**KECI**

On the inventory, or in compliance with the inventory

**PICCS**

On the inventory, or in compliance with the inventory

**IECSC**

On the inventory, or in compliance with the inventory

**NZIoC**

Not in compliance with the inventory

**TECI**

On the inventory, or in compliance with the inventory

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## SECTION 16: Other information

### Abbreviations and acronyms

CAS: Chemical Abstracts Service

TWA: Time-Weighted Average

STEL: Short-Term Exposure Limit

LD50: Lethal Dose 50%

LC50: Lethal Concentration 50%

EC50: Effective Concentration 50%

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

IMDG: International Maritime Dangerous Goods Code

IATA: International Air Transport Association

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

DOT: US Department of Transportation

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety and Health Administration

#### Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the

appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.