

## Chemical Safety Data Sheet MSDS / SDS

**2-Methoxyethyl acetate**

Revision Date:2024-08-31 Revision Number:1

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

Product name : 2-Methoxyethyl acetate  
CBnumber : CB8852810  
CAS : 110-49-6  
EINECS Number : 203-772-9  
Synonyms : 2-methoxyethyl acetate,2-Methoxyethyl

**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 : 400-158-6606

**SECTION 2: Hazards identification****Classification of the substance or mixture**

Acute toxicity - Category 4, Oral  
Acute toxicity - Category 4, Dermal  
Acute toxicity - Category 4, Inhalation  
Reproductive toxicity, Category 1B

**Label elements****Pictogram(s)**

Signal word : Danger

**Hazard statement(s)**

H226 Flammable liquid and vapour

**Precautionary statement(s)**

P201 Obtain special instructions before use.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P308+P313 IF exposed or concerned: Get medical advice/attention.

### Prevention

P264 Wash ... thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

P203 Obtain, read and follow all safety instructions before use.

### Response

P301+P317 IF SWALLOWED: Get medical help.

P330 Rinse mouth.

P302+P352 IF ON SKIN: Wash with plenty of water/...

P317 Get medical help.

P321 Specific treatment (see ... on this label).

P362+P364 Take off contaminated clothing and wash it before reuse.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P318 IF exposed or concerned, get medical advice.

### Storage

P405 Store locked up.

### Disposal

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

### Other hazards

no data available

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## SECTION 3: Composition/information on ingredients

### Substance

Product name	: 2-Methoxyethyl acetate
Synonyms	: 2-methoxyethyl acetate, 2-Methoxyethyl
CAS	: 110-49-6
EC number	: 203-772-9
MF	: C <sub>5</sub> H <sub>10</sub> O <sub>3</sub>
MW	: 118.13

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## SECTION 4: First aid measures

### Description of first aid measures

#### If inhaled

Fresh air, rest. Refer for medical attention.

#### Following skin contact

Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention .

#### Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

#### Following ingestion

Rinse mouth. Do NOT induce vomiting. Refer for medical attention .

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

May cause irritation if splashed into eyes. Can be absorbed through the skin. Swallowing a large single dose or absorbing large amount through skin could result in death. It is unlikely that air levels of the compound would be dangerous unless it is heated. (USCG, 1999)

#### Indication of any immediate medical attention and special treatment needed

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand-valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR as necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. Ethylene glycol, glycols, and related compounds

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## SECTION 5: Firefighting measures

### Extinguishing media

To fight fire, use CO<sub>2</sub>, dry chemical.

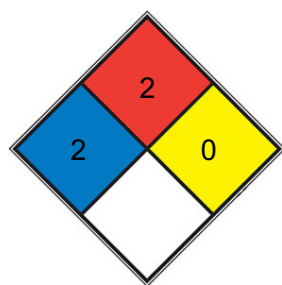
### Specific Hazards Arising from the Chemical

Special Hazards of Combustion Products: Irritating vapors and toxic gases, such as carbon monoxide, may be formed when involved in fire. (USCG, 1999)

### Advice for firefighters

Use water spray, powder, alcohol-resistant foam, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

### NFPA 704



**HEALTH 2** Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. [diethyl ether](#), ammonium phosphate, iodine)

**FIRE 2** Must be moderately heated or exposed to relatively high ambient temperature before ignition can occur and multiple finely divided suspended solids that do not require heating before ignition can occur. Flash point between 37.8 and 93.3 °C (100 and 200 °F). (e.g. diesel fuel, [sulfur](#))

**REACT 0** Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N<sub>2</sub>](#))

☐ SPEC.  
☐ HAZ.

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## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Ventilation. Remove all ignition sources. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

### Environmental precautions

Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Ventilation. Remove all ignition sources. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

### Methods and materials for containment and cleaning up

1. remove all ignition sources. 2. ventilate area of spill or leak. 3. for small quantities, absorb on paper towels. evaporate in safe place (such as fume hood). allow sufficient time...to completely clear hood ductwork. burn paper in suitable location away from combustible materials. large quantities can be collected & atomized in suitable combustion chamber. liq...should not be allowed to enter confined space, such as sewer, because of possibility of explosion.

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## SECTION 7: Handling and storage

### Precautions for safe handling

NO open flames, NO sparks and NO smoking. Above 45°C use a closed system, ventilation and explosion-proof electrical equipment. Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

### Conditions for safe storage, including any incompatibilities

Fireproof. Separated from strong oxidants, strong bases and strong acids. Keep in the dark. Fire proof. Separated from strong oxidants, strong bases, strong acids. Keep in the dark.

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## SECTION 8: Exposure controls/personal protection

### Control parameters

#### Occupational Exposure limit values

TLV: 0.1 ppm as TWA; (skin); BEI issued. MAK: 4.9 mg/m<sup>3</sup>, 1 ppm; peak limitation category: II(8); skin absorption (H); pregnancy risk group: B. EU-OEL: 1 ppm as TWA; (skin)

#### Biological limit values

no data available

### Exposure controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

### Individual protection measures

#### Eye/face protection

Wear safety goggles or eye protection in combination with breathing protection.

#### Skin protection

Protective gloves. Protective clothing.

#### Respiratory protection

Use ventilation, local exhaust or breathing protection.

#### Thermal hazards

no data available

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Physical state	Solid
Colour	White
Odour	Pleasant odor
Melting point/freezing point	294°C(lit.)
Boiling point or initial boiling point and boiling range	145°C(lit.)
Flammability	Class II Combustible Liquid: Fl.P. at or above 100°F and below 140°F.
Lower and upper explosion limit/flammability limit	1.7-8.8%(V)
Flash point	46°C
Auto-ignition temperature	740° F (USCG, 1999)
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	1.1 cP at 25 deg C
Solubility	Soluble in alcohol and ether (Weast, 1986).
Partition coefficient n-octanol/water	log Kow = 0.10 (est)
Vapour pressure	4.7 hPa (20 °C)
Density and/or relative density	1.009g/mL at 25°C(lit.)
Relative vapour density	4.07 (NTP, 1992) (Relative to Air)
Particle characteristics	no data available

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## SECTION 10: Stability and reactivity

### Reactivity

The substance can presumably form explosive peroxides. Reacts with strong oxidants and strong bases.

### Chemical stability

no data available

### Possibility of hazardous reactions

MODERATE /FIRE HAZARD/ WHEN EXPOSED TO HEAT OR FLAME; CAN REACT WITH OXIDIZING MATERIALSEsters react with acids to liberate heat along with alcohols and acids. Strong oxidizing acids may cause a vigorous reaction that is sufficiently exothermic to ignite the reaction products. Heat is also generated by the interaction of esters with caustic solutions. Flammable hydrogen is generated by mixing esters with alkali metals and hydrides.

### Conditions to avoid

no data available

### Incompatible materials

Nitrates, strong oxidizers, alkalis & acids

### Hazardous decomposition products

When heated to decomposition it emits acrid smoke and fumes.

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## SECTION 11: Toxicological information

### Acute toxicity

- Oral: LD50 Rat oral 3.93 g/kg
- Inhalation: LC50 Cat inhalation 2500 ppm for 9 hr
- Dermal: no data available

### Skin corrosion/irritation

no data available

### Serious eye damage/irritation

no data available

### Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

no data available

### Carcinogenicity

no data available

### Reproductive toxicity

no data available

### STOT-single exposure

The vapour is mildly irritating to the eyes. The substance may cause effects on the bone marrow and central nervous system. The substance may cause effects on the blood at high levels. This may result in lesions of blood cells and kidney impairment. Exposure far above the OEL could cause unconsciousness.

### **STOT-repeated exposure**

The substance defats the skin, which may cause dryness or cracking. The substance may have effects on the bone marrow and blood. This may result in lesions of blood cells and kidney impairment. May cause toxicity to human reproduction or development.

### **Aspiration hazard**

A harmful contamination of the air can be reached rather quickly on evaporation of this substance at 20°C.

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## **SECTION 12: Ecological information**

### **Toxicity**

Toxicity to fish: LC50; Species: *Lepomis macrochirus* (Bluegill); Conditions: static bioassay in fresh water at 23 deg C, mild aeration applied after 24 hr; Concentration: 45 ppm for 96 hr

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

### **Persistence and degradability**

AEROBIC: Methyl cellosolve present at 100 mg/L, reached 86.9% of its theoretical BOD in 2 weeks using an activated sludge inoculum at 30 mg/L in the Japanese MITI test(1). Methyl cellosolve acetate reached 30% of its theoretical BOD after 5 days using a sewage seed(2). 69% of the theoretical BOD for methyl cellosolve acetate was reached over a period of 10 days in a biodegradation study employing dispersed seed aeration(3).

### **Bioaccumulative potential**

An estimated BCF of 3.2 was calculated for methyl cellosolve acetate(SRC), using an estimated log Kow of 0.10(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests that bioconcentration in aquatic organisms is low(SRC).

### **Mobility in soil**

The Koc of methyl cellosolve acetate is estimated as approximately 30(SRC), using an estimated log Kow of 0.10(1) and a regression-derived equation(2). According to a recommended classification scheme(3), this estimated Koc value suggests that methyl cellosolve acetate is expected to have very high mobility in soil(SRC).

### **Other adverse effects**

no data available

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## **SECTION 13: Disposal considerations**

### **Disposal methods**

#### **Product**

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do

not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### **Contaminated packaging**

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

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## SECTION 14: Transport information

### **UN Number**

ADR/RID: UN1189 (For reference only, please check.)

IMDG: UN1189 (For reference only, please check.)

IATA: UN1189 (For reference only, please check.)

### **UN Proper Shipping Name**

ADR/RID: ETHYLENE GLYCOL MONOMETHYL ETHER ACETATE (For reference only, please check.)

IMDG: ETHYLENE GLYCOL MONOMETHYL ETHER ACETATE (For reference only, please check.)

IATA: ETHYLENE GLYCOL MONOMETHYL ETHER ACETATE (For reference only, please check.)

### **Transport hazard class(es)**

ADR/RID: 3 (For reference only, please check.)

IMDG: 3 (For reference only, please check.)

IATA: 3 (For reference only, please check.)

### **Packing group, if applicable**

ADR/RID: III (For reference only, please check.)

IMDG: III (For reference only, please check.)

IATA: III (For reference only, please check.)

### **Environmental hazards**

ADR/RID: No

IMDG: No

IATA: No

### **Special precautions for user**

no data available

### **Transport in bulk according to IMO instruments**

no data available

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## SECTION 15: Regulatory information

### **Safety, health and environmental regulations specific for the product in question**

#### **European Inventory of Existing Commercial Chemical Substances (EINECS)**

Chemical Book



Listed.

#### **EC Inventory**

Listed.

#### **United States Toxic Substances Control Act (TSCA) Inventory**

Listed.

#### **China Catalog of Hazardous chemicals 2015**

Listed.

#### **New Zealand Inventory of Chemicals (NZIoC)**

Listed.

#### **PICCS**

Listed.

#### **Vietnam National Chemical Inventory**

Listed.

#### **IECSC**

Listed.

#### **Korea Existing Chemicals List (KECL)**

Listed.

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## **SECTION 16: Other information**

### **Abbreviations and acronyms**

CAS: Chemical Abstracts Service

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

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

### **References**

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

## Other Information

Check for peroxides prior to distillation; eliminate if found. Health effects of exposure to the substance have not been investigated adequately. Its effects are deduced from those of similar substances.

### 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.