

# SAFETY DATA SHEETS

According to the UN GHS revision 9

Version: 1.0  
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## SECTION 1: Identification

### 1.1 GHS Product identifier

**Product name** 1-methoxypropan-2-ol

### 1.2 Other means of identification

**Product number** -  
**Other names** propylene glycol methyl ether; PGMME; Icinol PM

### 1.3 Recommended use of the chemical and restrictions on use

**Identified uses** Industrial and scientific research use.  
**Uses advised against** no data available

### 1.4 Supplier's details

**Company** Shanghai Yien Chemical Technology Co., Ltd  
**Address** Building 6, 28 Yingong Road, Fengxian District, Shanghai  
Chemical Industry Zone, Shanghai, 201400, China  
**Telephone** +86-400-133-2688

### 1.5 Emergency phone number

**Emergency phone number** +86-400-133-2688  
**Service hours** Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

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## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

Flammable liquids, Category 3  
Specific target organ toxicity – single exposure, Category 3

### 2.2 GHS label elements, including precautionary statements

**Pictogram(s)**



**Signal word** Warning  
**Hazard statement(s)** H226 Flammable liquid and vapour  
H336 May cause drowsiness or dizziness  
**Precautionary statement(s)**  
**Prevention** P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

<b>Response</b>	<p>P233 Keep container tightly closed.</p> <p>P240 Ground and bond container and receiving equipment.</p> <p>P241 Use explosion-proof [electrical/ventilating/lighting/...] equipment.</p> <p>P242 Use non-sparking tools.</p> <p>P243 Take action to prevent static discharges.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...</p> <p>P261 Avoid breathing dust/fume/gas/mist/vapours/spray.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].</p> <p>P370+P378 In case of fire: Use ... to extinguish.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p>
<b>Storage</b>	<p>P319 Get medical help if you feel unwell.</p> <p>P403+P235 Store in a well-ventilated place. Keep cool.</p> <p>P403+P233 Store in a well-ventilated place. Keep container tightly closed.</p> <p>P405 Store locked up.</p>
<b>Disposal</b>	<p>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.</p>

### 2.3 Other hazards which do not result in classification

no data available

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
1-methoxypropan-2-ol	1-methoxypropan-2-ol	107-98-2	203-539-1	100%

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## SECTION 4: First-aid measures

### 4.1 Description of necessary 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.

#### 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. Rest. Refer for medical attention .

### 4.2 Most important symptoms/effects, acute and delayed

VAPOR: Irritating to eyes, nose, and throat. LIQUID: Irritating to skin and eyes. (USCG, 1999)

### 4.3 Indication of immediate medical attention and special treatment needed, if necessary

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: Fire-fighting measures**

### **5.1 Suitable extinguishing media**

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

### **5.2 Specific hazards arising from the chemical**

FLAMMABLE. Flashback along vapor trail may occur. Vapor may explode if ignited in an enclosed area. (USCG, 1999)

### **5.3 Special protective actions for fire-fighters**

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

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

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

Collect leaking and spilled liquid in sealable containers as far as possible. Wash away remainder with plenty of water.

### **6.2 Environmental precautions**

Collect leaking and spilled liquid in sealable containers as far as possible. Wash away remainder with plenty of water.

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

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Beware of vapors accumulating to form explosive concentrations.

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

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

NO open flames, NO sparks and NO smoking. Above 38°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.

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

Fireproof. Cool. Keep in the dark. 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. Air sensitive. Forms explosive peroxides on prolonged storage. may form peroxidized on contact with air.

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

### **8.1 Control parameters**

#### **Occupational Exposure limit values**

TLV: 50 ppm as TWA; 100 ppm as STEL; A4 (not classifiable as a human carcinogen). MAK: 370 mg/m<sup>3</sup>, 100 ppm; peak limitation category: I(2); pregnancy risk group: C. EU-OEL: 375 mg/m<sup>3</sup>, 100 ppm as TWA; 568 mg/m<sup>3</sup>, 150 ppm as STEL; (skin)

#### **Biological limit values**

no data available

## 8.2 Appropriate engineering controls

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

## 8.3 Individual protection measures, such as personal protective equipment (PPE)

### Eye/face protection

Wear safety spectacles or face shield.

### 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 and safety characteristics

<b>Physical state</b>	Liquid.
<b>Colour</b>	Colourless.
<b>Odour</b>	Weak pleasant odor
<b>Melting point/freezing point</b>	-96 °C. Atm. press.:101 325 Pa.
<b>Boiling point or initial boiling point and boiling range</b>	120.17 °C. Atm. press.:101 325 Pa.
<b>Flammability</b>	Class IC Flammable Liquid: Fl.P. at or above 73°F and below 100°F.
<b>Lower and upper explosion limit/flammability limit</b>	Lower and upper flammability limits (% vol/vol) at 150 deg C in air are 1.48 and 13.74, respectively.
<b>Flash point</b>	31.1 °C. Atm. press.:101.3 hPa.
<b>Auto-ignition temperature</b>	287 °C. Atm. press.:101.3 hPa.
<b>Decomposition temperature</b>	no data available
<b>pH</b>	no data available
<b>Kinematic viscosity</b>	dynamic viscosity (in mPa s) = 1.7. Temperature:25.0°C.
<b>Solubility</b>	greater than or equal to 100 mg/mL at 66° F (NTP, 1992)
<b>Partition coefficient n-octanol/water</b>	log Pow = < 1. Temperature:20 °C.
<b>Vapour pressure</b>	11.7 mm Hg. Temperature:25 °C.;8.5 mm Hg. Temperature:20 °C.
<b>Density and/or relative density</b>	0.92 g/cm <sup>3</sup> . Temperature:25 °C.
<b>Relative vapour density</b>	3.12 (vs air)
<b>Particle characteristics</b>	no data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

The substance can presumably form explosive peroxides. Reacts with strong oxidants, acid chlorides, acid anhydrides, aluminium and copper.

### 10.2 Chemical stability

Volatile liquid.

### 10.3 Possibility of hazardous reactions

Moderate, when exposed to heat or flame 1-METHOXY-2-PROPANOL is a methoxy alcohol derivative. The ether being relatively unreactive. Flammable and/or toxic gases are generated by the combination of alcohols with alkali metals, nitrides, and strong reducing agents. They react with oxoacids and carboxylic acids to form esters plus water. Oxidizing agents convert them to aldehydes or ketones. Alcohols exhibit both weak acid and weak base behavior. They may initiate the polymerization of isocyanates and epoxides.

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

Strong oxidizing agents.

### 10.6 Hazardous decomposition products

Special hazards arising from the substance or mixture: carbon oxides.

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## SECTION 11: Toxicological information

### Acute toxicity

- Oral: LD50 - rat (female) - 4 277 mg/kg bw.
- Inhalation: LC0 - rat (male/female) - > 7 000 ppm.
- Dermal: LD50 - rat (male/female) - > 2 000 mg/kg bw.

### 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

A4: Not classifiable as a human carcinogen.

### Reproductive toxicity

no data available

### STOT-single exposure

The substance and the vapour in high concentrations are irritating to the eyes, skin and respiratory tract. Exposure to very high concentrations could cause depression of the central nervous system.

### STOT-repeated exposure

The substance defats the skin, which may cause dryness or cracking.

### Aspiration hazard

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

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## SECTION 12: Ecological information

### 12.1 Toxicity

- Toxicity to fish: LC50 - *Leuciscus idus* - > 4 600 - < 10 000 mg/L - 96 h.

- Toxicity to daphnia and other aquatic invertebrates: LC0 - Daphnia magna - < 1 412 mg/L - 48 h.
- Toxicity to algae: EC50 - Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) - > 1 000 mg/L - 7 d.
- Toxicity to microorganisms: IC50 - activated sludge - > 1 000 mg/L - 3 h.

## 12.2 Persistence and degradability

AEROBIC: 1-Methoxy-2-hydroxypropane, present at 100 mg/L, reached 90% of its theoretical BOD in four weeks using an activated sludge inoculum at 30 mg/L in the Japanese MITI test(1). The aerobic biodegradation of 1-methoxy-2-hydroxypropane was studied in two sandy loam soils; half-lives ranged from <1 day at 0.2 ppm to <7 days at 100 ppm(2). 1-Methoxy-2-propanol was reported to have a half-life of 17.0 days in an OECD 301B Guideline test(3). In a biodegradation test using an APHA method with 1-methoxy-2-propanol, 58% of the theoretical BOD was reached after 20 days(3).

## 12.3 Bioaccumulative potential

An estimated BCF of 3 was calculated in fish for 1-methoxy-2-hydroxypropane(SRC), using an estimated log Kow of -0.49(1) and a regression-derived equation(1). According to a classification scheme(2), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC).

## 12.4 Mobility in soil

Using a structure estimation method based on molecular connectivity indices(1), the Koc of 1-methoxy-2-hydroxypropane can be estimated to be 1(SRC). According to a classification scheme(2), this estimated Koc value suggests that 1-methoxy-2-hydroxypropane is expected to have very high mobility in soil.

## 12.5 Other adverse effects

no data available

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# SECTION 13: Disposal considerations

## 13.1 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

## 14.1 UN Number

ADR/RID: UN3092 (For reference only, please check.)

IMDG: UN3092 (For reference only, please check.)

IATA: UN3092 (For reference only, please check.)

## 14.2 UN Proper Shipping Name

ADR/RID: 1-METHOXY-2-PROPANOL (For reference only, please check.)

IMDG: 1-METHOXY-2-PROPANOL (For reference only, please check.)

IATA: 1-METHOXY-2-PROPANOL (For reference only, please check.)

## 14.3 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.)



- 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>
- ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

### **Other Information**

Commercial product may contain impurities which may alter toxic properties. Check for peroxides prior to distillation; eliminate if found.

**Any questions regarding this SDS, Please send your inquiry to [sds@xixisys.com](mailto:sds@xixisys.com)**

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