

Safety Data Sheet

Product name: 1-Methoxy-2-propanol

CAS No.: 107-98-2

Prepared in accordance with GB/T 16483, GB/T 17519

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

>Product identifier

- Product name: 1-Methoxy-2-propanol
- CBnumber: CB2351104
- CAS: 107-98-2
- EINECS Number: 203-539-1
- Synonyms: PGME,PM

>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: Linyi Tuohui New Materials Co., Ltd.
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SECTION 2: Hazards identification

>GHS Label elements, including precautionary statements

- Symbol(GHS)



- Signal wordWarning

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

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

P264 Wash hands thoroughly after handling.

P264 Wash skin thoroughly after handling.

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

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

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing.

Rinse SKIN with water/shower.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/container to.....

Hazard statements

H226 Flammable liquid and vapour

H320 Causes eye irritation

H336 May cause drowsiness or dizziness

SECTION 3: Composition/information on ingredients

>Substance

- Product name: 1-Methoxy-2-propanol
- Synonyms: PGME,PM
- CAS: 107-98-2
- EC number: 203-539-1
- MF: C₄H₁₀O₂
- MW: 90.12

SECTION 4: First aid measures

>Description of first aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower.

In case of eye contact

After eye contact: rinse out with plenty of water. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

>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

>Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

>Extinguishing media**Suitable extinguishing media**

Water Foam Carbon dioxide (CO₂) Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

>Special hazards arising from the substance or mixture

Carbon oxides

Flash back possible over considerable distance., Container explosion may occur under fire conditions., Vapors may form explosive mixture with air., May form peroxides of unknown stability.

Combustible.

Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air at elevated temperatures.

Development of hazardous combustion gases or vapours possible in the event of fire.

>Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

>Further information

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

>NFPA 704

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SECTION 6: Accidental release measures

>Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition.

Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

>Environmental precautions

Do not let product enter drains. Risk of explosion.

>Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb). Dispose of properly. Clean up affected area.

>Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

>Precautions for safe handling

> Advice on safe handling

Avoid generation of vapours/aerosols.

> Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

> Hygiene measures

Change contaminated clothing. Wash hands after working with substance. For precautions see section 2.2.

>Conditions for safe storage, including any incompatibilities

> Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Air sensitive. Forms explosive peroxides on prolonged storage May form peroxides on contact with air.

>Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

>control parameter

Hazard composition and occupational exposure limits

Does not contain substances with occupational exposure limits.

>Exposure controls

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact

Material: butyl-rubber

Minimum layer thickness: 0,7 mm Break through time: 480 min Material tested:Butoject (KCL 898)

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact Material: Nitrile rubber

Minimum layer thickness: 0,4 mm Break through time: 120 min

Material tested:Camatril (KCL 730 / Aldrich Z677442, Size M)

Body Protection

Flame retardant antistatic protective clothing.

Respiratory protection

Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains. Risk of explosion.

Exposure limits

TLV-TWA 100 ppm (370 mg/m³) (ACGIH); STEL 150 ppm (555 mg/m³) (ACGIH).

SECTION 9: Physical and chemical properties

>Information on basic physicochemical properties

- Appearancecolorless liquid, clear
- Odourethanolic
- Odour ThresholdNo data available
- pH4-7 (200g/l, H₂O, 20°C)
- Melting point/freezing pointMelting point: -96 °C at 1.013 hPa - (ECHA)
- Initial boiling point and boiling range118 - 119 °C - lit.
- Flash point31,1 °C - Non-equilibrium method
- Evaporation rateNo data available
- Flammability (solid, gas)No data available
- Upper/lower flammability or explosive limits Upper explosion limit: 13,74 %(V) Lower explosion limit: 1,48 %(V)
- Vapour pressure 11,33 hPa at 20 °C
- Vapour density 3,11 - (Air = 1.0)
- Relative densityNo data available
- Water solubilitycompletely miscible
- Partition coefficient: n-octanol/waterPow:< 1 at 20 °C
- Autoignition temperatureNo data available
- Decomposition temperatureNo data available
- ViscosityViscosity, kinematic: No data available Viscosity, dynamic: 1,7 mPa.s at 25 °C

- Explosive properties No data available
- Oxidizing properties No data available

>Other safety information

Surface tension 70,7 mN/m at 1g/l at 20 °C

- OECD Test Guideline 115

Relative vapor density

3,11 - (Air = 1.0)

SECTION 10: Stability and reactivity

>Reactivity

Can violently decompose at elevated temperatures Stable under recommended storage conditions.

Vapor/air-mixtures are explosive at intense warming.

>Chemical stability

Sensitive to air.

The product is chemically stable under standard ambient conditions (room temperature) .

May form peroxides on prolonged storage. Date container and periodically test for peroxides.

>Possibility of hazardous reactions

No data available

>Conditions to avoid

May form explosive peroxides. Heating.

>Incompatible materials

>Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

>Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female - 4.016 mg/kg

(EC Directive 92/69/EEC B.1 Acute Toxicity (Oral)) LC50 Inhalation - Rat - 5 h - 10000 ppm

LD50 Dermal - Rabbit - 13.000 mg/kg

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Mild eye irritation - 24 h

Respiratory or skin sensitization

No data available

Sensitisation test: - Guinea pig Result: negative

Remarks:

(IUCLID)

Germ cell mutagenicity**Carcinogenicity****Reproductive toxicity****Specific target organ toxicity - single exposure**

May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure**Aspiration hazard**

No data available

SECTION 12: Ecological information

>Toxicity

Toxicity to fish

LC50 - Leuciscus idus (Golden orfe) - 6.812 mg/l - 96 h (DIN 38412 part 15)

Toxicity to algae

static test ErC50 - Pseudokirchneriella subcapitata (green algae) - >

1.000 mg/l - 7 d Remarks: (ECHA)

(1-methoxy-2-propanol)

Toxicity to bacteria

Remarks: (External MSDS)

(1-methoxy-2-propanol)

>Persistence and degradability

Biodegradability aerobic Dissolved organic carbon (DOC) - Exposure time 28 d Result: 96 % - Readily biodegradable.

(OECD Test Guideline 301E)

>Bioaccumulative potential

>Mobility in soil

No data available

>Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

>Toxics Screening Level

The initial threshold screening level (ITSL) for exposure to propylene glycol monomethyl ether (PGME) is 3,700 µg/m³ (1-hour averaging time) and 2,000 µg/m³(annual averaging time).

>Other adverse effects

SECTION 13: Disposal considerations

>Waste treatment methods

Incompatibilities

Vapor may form explosive mixture with air. Incompatible with oxidizers (chlorates, nitrates, peroxides, permanganates, perchlorates, etc.); contact may cause fires or explosions. Keep away from alkaline materials, strong bases, strong acids, oxoacids, epoxides, acid chlorides, acid anhydrides, isocyanates, aluminum, and copper. Hygroscopic (i.e., absorbs moisture from the air).

> Product

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

Waste Disposal

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. All federal, state, and local environmental regulations must be observed.

SECTION 14: Transport information

>UN number

ADR/RID: 3092 IMDG: 3092 IATA: 3092

14.2	UN proper shipping name ADR/RID: 1-METHOXY-2-PROPANOL IMDG: 1-METHOXY-2-PROPANOL IATA: 1-Methoxy-2-propanol	
14.3	Transport hazard class(es) ADR/RID: 3 IMDG: 3	IATA: 3
14.4	Packaging group ADR/RID: III IMDG: III	IATA: III
14.5	Environmental hazards ADR/RID: no IMDG Marine pollutant: no	IATA: no
14.6	Special precautions for user No data available	

SECTION 15: Regulatory information

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

Regulations on the Safety Management of Hazardous Chemicals

China Catalog of Hazardous chemicals 2015:Not Listed. website: <https://www.mem.gov.cn/>

Measures for Environmental Management of New Chemical Substances

Philippines Inventory of Chemicals and Chemical Substances (PICCS):Listed. website: <https://emb.gov.ph/>

EC Inventory:Listed.

European Inventory of Existing Commercial Chemical Substances (EINECS):Listed. website: <https://echa.europa.eu/>

New Zealand Inventory of Chemicals (NZIoC):Listed. website: <https://www.epa.govt.nz/>

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC):Listed. website: <https://www.mee.gov.cn/>

United States Toxic Substances Control Act (TSCA) Inventory:Listed. website: <https://www.epa.gov/>

Korea Existing Chemicals List (KECL):Listed. website: <http://ncis.nier.go.kr>

Vietnam National Chemical Inventory:Listed. website: <https://chemicaldata.gov.vn/>

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

- 【1】 CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>
- 【2】 ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>
- 【3】 ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>
- 【4】 eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en
- 【5】 ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>
- 【6】 Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>
- 【7】 HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>
- 【8】 IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>
- 【9】 IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>
- 【10】 Sigma-Aldrich, website: <https://www.sigmaaldrich.com/>

>Other Information

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