

Safety Data Sheet

Product name: Ethylene glycol monoethyl ether acetate

CAS No.: 111-15-9

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: Ethylene glycol monoethyl ether acetate
- CBnumber: CB7377556
- CAS: 111-15-9
- EINECS Number: 203-839-2
- Synonyms: ethyl glycol acetate,2-Ethoxyethyl acetate

>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 word Danger

Precautionary statements

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

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

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

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

P405 Store locked up.

P403+P235 Store in a well-ventilated place. Keep cool.

P370+P378 In case of fire: Use ... for extinction.

P308+P313 IF exposed or concerned: Get medical advice/attention.

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

Rinse SKIN with water/shower.

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

P273 Avoid release to the environment.

P264 Wash skin thoroughly after handling.

P264 Wash hands thoroughly after handling.

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

Hazard statements

H226 Flammable liquid and vapour

H302 Harmful if swallowed

H312 Harmful in contact with skin

H320 Causes eye irritation

H332 Harmful if inhaled

H360 May damage fertility or the unborn child

H402 Harmful to aquatic life

Disposal

WARNING.Cancer - <https://oehha.ca.gov/proposition-65/chemicals/ethylene-glycol-monoethyl-ether-acetate>

SECTION 3: Composition/information on ingredients

>Substance

- Product name: Ethylene glycol monoethyl ether acetate
- Synonyms: ethyl glycol acetate,2-Ethoxyethyl acetate
- CAS: 111-15-9
- EC number: 203-839-2
- MF: C₆H₁₂O₃

- MW: 132.16

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

If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact

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

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. 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

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 Combustible.

Vapors are heavier than air and may spread along floors. Risk of dust explosion.

Forms explosive mixtures with air at elevated temperatures.

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

>Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

>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

2

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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 carefully with liquid-absorbent material (e.g.

Chemisorb). 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

Work under hood. Do not inhale substance/mixture. 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

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face 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. Keep locked up or in an area accessible only to qualified or authorized persons.

>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

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 Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Full contact

Material: butyl-rubber

Minimum layer thickness: 0,3 mm Break through time: 480 min

Material tested:Butoject (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber

Minimum layer thickness: 0,4 mm Break through time: 78 min

Material tested: Camatril (KCL 730 / Aldrich Z677442, 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 EC 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

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

NIOSH REL: TWA 0.5 ppm (2.7 mg/m³), IDLH 500 ppm; OSHA PEL: TWA 100 ppm (540 mg/m³); ACGIH TLV: TWA 5 ppm (adopted).

SECTION 9: Physical and chemical properties

>Information on basic physicochemical properties

- Appearance colorless clear, liquid
- Odour fruity
- Odour Threshold 0.049 ppm
- pH 4 - 5 at 20 °C (saturated solution)
- Melting point/freezing point Melting point/range: -61 °C - lit.
- Initial boiling point and boiling range 156 °C - lit.
- Flash point 54 °C - closed cup
- Evaporation rate No data available
- Flammability (solid, gas) No data available

- Upper/lower flammability or explosive limits Upper explosion limit: 13 %(V) Lower explosion limit: 1,7 %(V)
- Vapour pressure 3 hPa at 20 °C
- Vapour density 4,56 - (Air = 1.0)
- Relative density 0,975 g/cm³ at 25 °C - lit. No data available
- Water solubility 247 g/l at 20 °C
- Partition coefficient: n-octanol/water log Pow: 0,24 - Bioaccumulation is not expected.
- Autoignition temperature No data available
- Decomposition temperature No data available
- Viscosity Viscosity, kinematic: No data available Viscosity, dynamic: 1,32 mPa.s at 20 °C
- Explosive properties No data available
- Oxidizing properties No data available
- Henry's Law Constant 9.07(x 10⁻⁷ atm·m³/mol) at 25 °C (approximate - calculated from water solubility and vapor pressure) 33.0(x 10⁻⁷ atm·m³/mol) at 30.00 °C (headspace-GC, Hovorka et al., 2002)

>Other safety information

Surface tension 31,8 mN/m at 25 °C

Relative vapor density

4,56 - (Air = 1.0)

SECTION 10: Stability and reactivity

>Reactivity

Vapor/air-mixtures are explosive at intense warming.

>Chemical stability

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

>Possibility of hazardous reactions

Exothermic reaction with:

Oxidizing agents Bases

acids

Risk of ignition or formation of inflammable gases or vapours with: Aluminum

Release of:

Hydrogen

>Conditions to avoid

Heating.

>Incompatible materials

Aluminum, Strong oxidizing agents

>Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

>Information on toxicological effects

Acute toxicity

LD50 Oral - Rabbit - 1.950 mg/kg Remarks: (RTECS)

Acute toxicity estimate Inhalation - 4 h - 11 mg/l (Expert judgment)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Acute toxicity estimate Inhalation - 4 h - 11 mg/l (Expert judgment)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Acute toxicity estimate Dermal - 1.100 mg/kg (Expert judgment)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Acute toxicity estimate Dermal - 1.100 mg/kg (Expert judgment)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

Respiratory or skin sensitization

Germ cell mutagenicity

Carcinogenicity

Reproductive toxicity

May damage the unborn child. May damage fertility.

Specific target organ toxicity - single exposure

Specific target organ toxicity - repeated exposure

Aspiration hazard

Toxicity

Acute oral LD50 for guinea pigs 1,910 mg/kg, rats 2,900 mg/kg, rabbits 1,950 mg/kg (quoted, RTECS, 1985).

SECTION 12: Ecological information

>Toxicity

Toxicity to fish

LC50 - Pimephales promelas (fathead minnow) - 40,7 - 43,6 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea) - 193,6 mg/l - 48 h

Toxicity to algae

EC50 - Desmodesmus subspicatus (green algae) - > 1.000 mg/l - 72 h

Toxicity to bacteria

EC10 - Pseudomonas putida - 435 mg/l - 16 h

(DIN 38412)

>Persistence and degradability

Biodegradability Result: 97 % - Readily biodegradable.

(OECD Test Guideline 301E)

Biochemical Oxygen Demand (BOD)

< 440 mg/g Remarks: (IUCLID)

>Bioaccumulative potential

No data available

>Mobility in soil

>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 ethylene glycol monoethyl ether acetate (EGEEA) is 290 µg/m³ based on a 24-hour averaging time.

>Other adverse effects

Additional ecological information

Avoid release to the environment.

SECTION 13: Disposal considerations

>Waste treatment methods

> Product

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

Incompatibilities

May form explosive mixture with air. Incompatible with strong acids; strong alkalies; nitrates. Violent reaction with oxidizers. May form unstable peroxides. Softens many plastics. Attacks some plastics, rubber, and coatings

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: 1172 IMDG: 1172 IATA: 1172

>UN proper shipping name

	ADR/RID: ETHYLENE GLYCOL MONOETHYL ETHER ACETATE IMDG: ETHYLENE GLYCOL MONOETHYL ETHER ACETATE	
IATA: Ethylene glycol monoethyl ether acetate		
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:Listed. website: <https://www.mem.gov.cn/>

Measures for Environmental Management of New Chemical Substances

United States Toxic Substances Control Act (TSCA) Inventory:Listed. website:

<https://www.epa.gov/>

European Inventory of Existing Commercial Chemical Substances (EINECS):Listed. website:

<https://echa.europa.eu/>

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC):Listed. website:

<https://www.mee.gov.cn/>

EC Inventory:Listed.

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

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

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

Philippines Inventory of Chemicals and Chemical Substances (PICCS):Listed. website:

<https://emb.gov.ph/>

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

Check for peroxides prior to distillation; eliminate if found.