

## Chemical Safety Data Sheet MSDS / SDS

## 2-ethoxyethyl acetate SDS

Revision Date:2024-04-25 Revision Number:1

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

Product name: 2-ethoxyethyl acetate

CAS: 111-15-9

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

Relevant identified uses: For R&amp;D use only. Not for medicinal, household or other use.

Uses advised against: none

**Company Identification**

Company: Chemicalbook.in

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**SECTION 2: Hazards identification****Classification of the substance or mixture**Flammable liquids, Category 3  
Acute toxicity - Category 4, Oral

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

### GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Danger

### Hazard statement(s)

H226 Flammable liquid and vapour  
H302 Harmful if swallowed  
H312 Harmful in contact with skin  
H332 Harmful if inhaled

### Precautionary statement(s)

### Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233 Keep container tightly closed.  
P240 Ground and bond container and receiving equipment.  
P241 Use explosion-proof [electrical/ventilating/lighting/...] equipment.  
P242 Use non-sparking tools.  
P243 Take action to prevent static discharges.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...  
P264 Wash ... thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
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

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].  
P370+P378 In case of fire: Use ... to extinguish.  
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**

P403+P235 Store in a well-ventilated place. Keep cool.  
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 which do not result in classification**

no data available

### **SECTION 3: Composition/information on ingredients**

#### **Substance**

Chemical name:	2-ethoxyethyl acetate
Common names and synonyms:	2-ethoxyethyl acetate
CAS number:	111-15-9
EC number:	203-839-2
Concentration:	100%

### **SECTION 4: First aid measures**

#### **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. 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/effects, acute and delayed**

Vapors irritate nose and eyes in high concentrations. Liquid irritates skin in prolonged or repeated contact. (USCG, 1999)

**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

**SECTION 5: Firefighting measures****Suitable extinguishing media**

To fight fire, use alcohol foam, co2, dry chemical.

**Specific hazards arising from the chemical**

Excerpt from ERG Guide 129 [Flammable Liquids (Water-Miscible / Noxious)]: HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in sewers. Those substances designated with a (P) may polymerize explosively when heated or involved in a fire. Runoff to sewer may create fire or explosion hazard. Containers may explode when heated. Many liquids are lighter than water. (ERG, 2016)

**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.

## 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. Ventilation. Remove all ignition sources. Do NOT let this chemical enter the environment. 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. Ventilation. Remove all ignition sources. Do NOT let this chemical enter the environment. 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

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

## SECTION 7: Handling and storage

### Precautions for safe handling

NO open flames, NO sparks and NO smoking. Above 51.1°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. MATERIALS WHICH ARE TOXIC AS STORED OR WHICH CAN DECOMPOSE INTO TOXIC COMPONENTS ... SHOULD BE STORED IN A COOL WELL VENTILATED PLACE, OUT OF THE DIRECT RAYS OF THE SUN, AWAY FROM AREAS OF HIGH FIRE HAZARD, AND SHOULD BE PERIODICALLY INSPECTED. INCOMPATIBLE MATERIALS SHOULD BE ISOLATED ...

## SECTION 8: Exposure controls/personal protection

### Control parameters

### Occupational Exposure limit values

TLV: 5 ppm as TWA; (skin); BEI issued.MAK: 11 mg/m<sup>3</sup>, 2 ppm; peak limitation category: II(8); skin absorption (H); pregnancy risk group: B.EU-OEL: 11 mg/m<sup>3</sup>, 2 ppm as TWA; (skin)

### Biological limit values

no data available

### 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.

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

#### 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

## SECTION 9: Physical and chemical properties and safety characteristics

Physical state: Ethylene glycol monoethyl ether acetate is a clear colorless liquid with a pleasant odor. Flash point of 120°F. Less dense than water. Vapors are heavier than air.

Colour: Colorless liquid

Odour:	MILD ESTER-LIKE ODOR BECOMES OBJECTIONABLE IN HIGH CONCEN ...
Melting point/freezing point:	-62°C(lit.)
Boiling point or initial boiling point and boiling range:	156°C
Flammability:	Class II Combustible Liquid: Fl.P. at or above 100°F and below 140°F.
Lower and upper explosion limit/flammability limit:	Lower flammable limit :1.7 % by volume; Upper flammable limit: 10 % by volume
Flash point:	55°C(lit.)
Auto-ignition temperature:	715° F (USCG, 1999)
Decomposition temperature:	no data available
pH:	no data available
Kinematic viscosity:	1.32 cP at 20 deg C
Solubility:	greater than or equal to 100 mg/mL at 66° F (NTP, 1992)
Partition coefficient n-octanol/water:	log Kow = 0.24
Vapour pressure:	2 mm Hg ( 20 °C)
Density and/or relative density:	0.97
Relative vapour density:	4.6 (vs air)
Particle characteristics:	no data available

## SECTION 10: Stability and reactivity

### Reactivity

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

### Chemical stability

no data available

### Possibility of hazardous reactions

MODERATE, WHEN EXPOSED TO HEAT OR FLAME; CAN REACT WITH OXIDIZING MATERIALS. SPONTANEOUS HEATING: NO. Mixing ETHYLENE GLYCOL MONOETHYL ETHER ACETATE in equal molar portions with any of the following substances in a closed container caused the temperature and pressure to increase: chlorosulfonic acid, oleum, and vinyl acetate, NFPA 1991.

### Conditions to avoid

no data available

### Incompatible materials

Incompatibilities: Nitrates, strong oxidizers, strong alkalies, strong acids.

### Hazardous decomposition products

When heated to decomposition it emits acrid smoke and irritating fumes.

## SECTION 11: Toxicological information

### Acute toxicity

Oral: LD50 Rat oral 5.1 g/kg

Inhalation: LC50 Rat inhalation 1500 ppm/8 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 blood at high levels. This may result in lesions of blood cells and kidney impairment. The substance may cause effects on the central nervous system. 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 blood. This may result in lesions of blood cells, anaemia and kidney impairment. May cause toxicity to human reproduction or development.

**Aspiration hazard**

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

**SECTION 12: Ecological information****Toxicity**

Toxicity to fish: LC50; Species: Pimephales promelas (Fathead minnow, weight 148 mg); Conditions: flow-through bioassay, dissolved oxygen 7.4 (4.6-8.8) mg/L, water hardness 44.9 (42.4-46.6) mg/L as CaCO<sub>3</sub>, pH 6.9-7.7, alkalinity 42.9 (39.6-61.4) mg/L CaCO<sub>3</sub>, temp: 26.4 + or - 1.4 deg C; Concentration: 44.0 (43.0-45.1) mg/L for 24 hr /Purity 99%

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: A 5-day BOD test showed a 41% of theoretical BOD for ethylene glycol monoethyl ether acetate using a sewage inoculum and the standard dilution method(1). BOD values which were 36, 79, 82, and 80% of the theoretical value were measured for 5, 10, 15, and 20 days incubation, respectively, using a non-acclimated, settled wastewater seed(2). BOD values of 10, 44, 59, and 69% of the theoretical BOD were measured for 5, 10, 15, and 20 days incubation, respectively, using a non-acclimated seawater seed with added raw wastewater(2). Ethylene glycol monoethyl ether acetate is considered to be "well-biodegradable" (theoretical BOD > 30% after 14 days of inoculation) using the Japanese MITI protocol(3). A 5-day BOD 18.1% of the theoretical value was measured using a sewage inoculum and the standard dilution method(4); a 5-day BOD 1.1% of the theoretical value was measured using a seawater inoculum and a seawater dilution method(4). Ethylene glycol monoethyl ether acetate was classified as easily degraded using the TOC die-away method in two river waters, with a 28 day incubation(5).

### **Bioaccumulative potential**

An estimated BCF value of 3.0 was calculated for ethylene glycol monoethyl ether acetate(SRC), using a measured log Kow of 0.24(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF value suggests the potential for bioconcentration in aquatic organisms is low(SRC).

### **Mobility in soil**

The Koc of ethylene glycol monoethyl ether acetate is estimated as 32(SRC), using a log Kow of 0.24(1) and a regression-derived equation(2). According to a classification scheme(3), this estimated Koc value suggests that ethylene glycol monoethyl ether acetate is expected to have a very high mobility in soil(SRC).

### **Other adverse effects**

no data available

## **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.

## SECTION 14: Transport information

### UN Number

ADR/RID: UN1172 (For reference only, please check.)

IMDG: UN1172 (For reference only, please check.)

IATA: UN1172 (For reference only, please check.)

### UN Proper Shipping Name

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

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

IATA: ETHYLENE GLYCOL MONOETHYL 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

**SECTION 15: Regulatory information**

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

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

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.

## **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>

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

### **Other Information**

Check for peroxides prior to distillation; eliminate if found.

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. We as supplier shall not be held liable for any