

Section 1. Product and Company Identification

**Product Name** Ethylene Glycol Monoethyl Ether  
**CAS Number** 110-80-5

**Parchem - fine & specialty chemicals**  
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Collect Calls Accepted

Section 2. Hazards Identification

**Classification of the substance or mixture**  
**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Flammable liquids (Category 3), H226  
Acute toxicity, Oral (Category 4), H302  
Acute toxicity, Inhalation (Category 3), H331  
Reproductive toxicity (Category 1B), H360

**GHS Label Elements**

**Pictograms:**



**Signal word:** DANGER

**Hazard and precautionary statements**

**Hazard Statements**

H226 Flammable liquid and vapor.  
H302 Harmful if swallowed.  
H331 Toxic if inhaled.  
H360 May damage fertility or the unborn child.

**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.  
P241 Use explosion-proof electrical/ventilating/lighting/equipment.



- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
- P264 Wash skin thoroughly after handling.
- P270 Do not eat, drink, or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor.
- P308 + P313 IF exposed or concerned: Get medical advice/attention.
- P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
- P403 + P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.
- P501 Dispose of contents/container to an approved waste disposal plant.

**Hazards not otherwise classified (HNOC) or not covered by GHS:** None

Section 3. Composition / Information on Ingredients

**Common Name** Ethylene Glycol Monoethyl Ether  
**Synonym(s)** 2-Ethoxyethanol  
**Formula** C<sub>4</sub>H<sub>10</sub>O<sub>2</sub>  
**CAS Number** 110-80-5

COMPONENT	CAS NUMBER	CONCENTRATION
Ethylene Glycol Monoethyl Ether	110-80-5	<= 100%

Section 4. First Aid Measures

**Description of first-aid measures**

**General advice:** Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**Inhalation:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**Skin contact:** Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

**Eye contact:** Flush eyes with water as a precaution.

**Ingestion:** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. 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) 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:** Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

**Special hazards arising from the substance or mixture:** No data available

**Advice for firefighters:** Wear self-contained breathing apparatus for firefighting if necessary.

**Further information:** Use water spray to cool unopened containers.

#### Section 6. Accidental Release Measures

**Personal precautions, protective equipment, and emergency procedures:** Wear respiratory protection. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. For personal protection see section 8.

**Environmental precautions:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods and materials for containment and cleaning up:** Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

**Reference to other sections:** For disposal see section 13.

#### Section 7. Handling and Storage

**Precautions for safe handling:** Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge. For precautions see section 2.

**Conditions for safe storage, including any incompatibilities:** 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. Storage class (TRGS 510): Flammable liquids

Section 8. Exposure Controls / Personal Protection

**Control parameters**

**Components with workplace control parameters**

Component	CAS-No.	Value	Control parameters	Basis
2-Ethoxyethanol	110-80-5	TWA	0.500000 ppm 1.800000 mg/m <sup>3</sup>	USA NIOSH Recommended Exposure Limits
	Remarks	Potential for dermal absorption		
		TWA	5.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Embryo/fetal damage Male reproductive damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Danger of cutaneous absorption		
		TWA	5 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Embryo/fetal damage Male reproductive damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Danger of cutaneous absorption		
		TWA	200.000000 ppm 740.000000 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		Skin designation The value in mg/m <sup>3</sup> is approximate.		
		TWA	200 ppm 740 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		Skin designation The value in mg/m <sup>3</sup> is approximate.		
		PEL	5 ppm 18 mg/m <sup>3</sup>	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		Skin		

**Biological occupational exposure limits**

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
2-Ethoxyethanol	110-80-5	2-Ethoxyacetic acid	100 mg/g Creatine	Urine	ACGIH - Biological Exposure Indices (BEI)



	Remarks	End of shift at end of workweek
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### Exposure controls

**Appropriate engineering controls:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

### Personal protective equipment

**Eye/face protection:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**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.

**Body Protection:** Complete suit protecting against chemicals, Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection:** Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Control of environmental exposure:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

## Section 9. Physical and Chemical Properties

### Information on basic physical and chemical properties

**Appearance:** Liquid

**Odor:** No data available

**Odor Threshold:** No data available

**pH:** No data available

**Melting point/freezing point:** -90°C (-130°F) - lit.

**Initial boiling point and boiling range:** 135°C (275°F) - lit.

**Flash point (Closed Cup):** 42°C (108°F)

**Evaporation rate:** No data available

**Flammability (solid, gas):** No data available

### Upper/lower flammability or explosive limits

**Upper explosion limit:** 14% (V)

**Lower explosion limit:** 1.8% (V)

**Vapor pressure:** 5.1 hPa (3.8 mmHg) at 20°C (68°F)

**Vapor density:** 3.11 - (Air = 1.0)

**Relative density:** 0.93 g/mL at 25°C (77°F)



**Water solubility:** Completely Miscible  
**Partition coefficient (n-Octanol/water):** No data available  
**Auto-ignition temperature:** No data available  
**Decomposition temperature:** No data available  
**Viscosity:** No data available  
**Explosive properties:** No data available  
**Oxidizing properties:** No data available

#### Other safety information

**Relative vapor density:** 3.11 - (Air = 1.0)

#### Section 10. Stability and Reactivity

**Reactivity:** No data available  
**Chemical stability:** Stable under recommended storage conditions.  
**Possibility of hazardous reactions:** No data available  
**Conditions to avoid:** Heat, flames, and sparks.  
**Incompatible materials:** Oxidizing agents, Copper

#### Hazardous decomposition products

**Hazardous decomposition products formed under fire conditions:** Carbon oxides

**Other decomposition products:** No data available

In the event of fire: see section 5

#### Section 11. Toxicological Information

#### Information on toxicological effects

##### Acute toxicity

**LD50 Oral - Rat:** 2,125 mg/kg

Remarks: Behavioral: Somnolence (general depressed activity). Respiratory disorder

**LD50 Oral - Guinea pig:** 1,400 mg/kg

Remarks: Behavioral: General anesthetic. Gastrointestinal: Other changes. Kidney, Ureter, Bladder: Other changes.

**LC50 Inhalation - Rat:** 2000 ppm (7h)

**LC50 Inhalation - Rat:** 7.36 mg/l (8h)

**LD50 Dermal - Rabbit:** 3,300 mg/kg

#### Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Mild eye irritation - 24 h



**Respiratory or skin sensitization**

Maximization Test - Guinea pig  
Result: Does not cause skin sensitization.  
(OECD Test Guideline 406)

**Germ cell mutagenicity:** No data available

**Carcinogenicity**

**IARC:** No component of this product, present at levels greater than or equal to 0.1%, is identified as probable, possible or confirmed human carcinogen by IARC.

**NTP:** No component of this product, present at levels greater than or equal to 0.1%, is identified as a known or anticipated carcinogen by NTP.

**OSHA:** No component of this product, present at levels greater than or equal to 0.1%, is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity:** May cause congenital malformation in the fetus. Presumed human reproductive toxicant. May cause reproductive disorders.

**Specific target organ toxicity – single exposure:** No data available

**Specific target organ toxicity – repeated exposure:** No data available

**Aspiration hazard:** No data available

**Additional Information**

**RTECS:** KK8050000

Acute symptoms of overexposure include: Narcosis, Liver injury may occur. Kidney injury may occur. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Stomach – Irregularities – Based on Human Evidence

Section 12. Ecological Information

**Toxicity**

**Toxicity to fish**

LC50 - Lepomis macrochirus: > 10,000 mg/l (96 h)

**Toxicity to daphnia and other aquatic invertebrates**

EC50 - Daphnia (water flea): 1,892.52 mg/l (48 h)

**Persistence and degradability**

**Biodegradability Result:** 63 – 83% - Readily biodegradable

(OECD Test Guideline 301C)

**Remarks:** No data available

**Bioaccumulative potential:** No data available

**Mobility in soil:** No data available

**Results of PBT and vPvB assessment:** PBT/vPvB assessment not available as chemical safety assessment not required/not conducted



**Other adverse effects:** No data available

Section 13. Disposal Considerations

**Waste Treatment Methods:** Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

**DOT (US)**

**UN number:** 1171

**Class:** 3

**Packing group:** III

**Proper shipping name:** Ethylene Glycol Monoethyl Ether

**Reportable Quantity (RQ):** 1000 lbs

**Poison Inhalation Hazard:** No

**IMDG**

**UN number:** 1171

**Class:** 3

**Packing group:** III

**EMS-No:** F-E, S-D

**Proper shipping name:** Ethylene Glycol Monoethyl Ether

**IATA**

**UN number:** 1171

**Class:** 3

**Packing group:** III

**Proper shipping name:** Ethylene Glycol Monoethyl Ether

Section 15. Regulatory Information

**SARA 302 Components:** No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

The following components are subject to reporting levels established by SARA Title III, Section 313:

2-Ethoxyethanol (CAS-No. 110-80-5)

Revision Date: 1993-04-24

**SARA 311/312 Hazards**

Fire Hazard, Acute Health Hazard, Chronic Health Hazard





**Massachusetts Right to Know Components**

2-Ethoxyethanol (CAS-No. 110-80-5)

Revision Date: 1993-04-24

**Pennsylvania Right to Know Components**

2-Ethoxyethanol (CAS-No. 110-80-5)

Revision Date: 1993-04-24

**New Jersey Right to Know Components**

2-Ethoxyethanol (CAS-No. 110-80-5)

Revision Date: 1993-04-24

**California Prop. 65 Components**

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm:

2-Ethoxyethanol (CAS-No. 110-80-5)

Revision Date: 1993-04-24

**HMIS Rating**

**Health:** 1\*

**Flammability:** 2

**Reactivity:** 0

**NFPA Rating**

**Health:** 1

**Flammability:** 2

**Reactivity:** 0

Section 16. Other Information

**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.

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