

# MATERIAL SAFETY DATA SHEET

## Ethylene Glycol Monoethyl Ether

This MSDS is valid for all grades and catalog #'s

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### 1. IDENTIFICATION OF SUBSTANCE / MIXTURE AND OF SUPPLIER

**Product Identifier:** High Purity Chemicals  
**Synonyms:** Ethylene glycol monoethyl ether; Ethyl glycol  
**Other means of identification:** CAS No. 110-80-5  
EINECS No. 203-804-1

**Recommended use of the chemical and restrictions on use:**

General use solvent

**Supplier Details:**

**Pharmco Products, Inc.**  
1101 Isaac Shelby Drive, Shelbyville,  
KY 40065, USA.  
Tel: 502.232.7600  
Fax: 502.633.6100  
CCN17213

**Pharmco Products, Inc.**  
58 Vale Road, Brookfield,  
CT 06804, USA.  
Tel: 203.740.3471  
Fax: 203.740.3481  
CCN17213

**Emergency Contact:** CHEMTREC: 1.800.424.9300 (USA) / +1.703.527.3887 (International)

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### 2. HAZARDS IDENTIFICATION

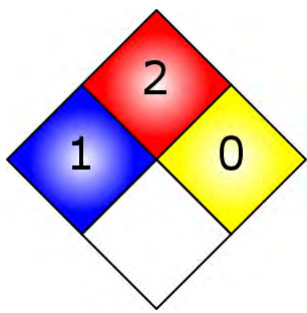
**OSHA Hazards:**

Combustible liquid, Reproductive hazard, Target organ effect, Teratogen

**Target Organs:**

Blood, Central nervous system, Kidney, Liver

**NFPA**



**GHS label elements, including precautionary statements**



**Signal Word:**

DANGER!

**Hazard statement(s)**

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

**Precautionary statement(s)**

P261	Avoid breathing dust/fumes/gas/mist/vapors.
P501	Dispose of contents and container to an approved waste disposal plant.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P210	Keep away from heat, sparks, open flames, and hot surfaces. No smoking.
P201	Obtain special instructions before use.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.

**GHS Classification(s)**

Acute Toxicity, Inhalation (Category 3)  
Acute toxicity, Oral (Category 4)  
Flammable Liquids (Category 3)  
Reproductive toxicity (Category 1B)

**Other hazards which do not result in classification:**

**Potential Health Effects:**

Organ	Description
Eyes	Can be irritating to the eyes.
Ingestion	Can be harmful through ingestion.
Inhalation	Can be harmful, causing irritation to the respiratory tract, if inhaled.
Skin	Can be harmful, causing irritation, if absorbed through the skin.

Product Information: 203.740.3471 Emergency Assistance (CHEMTREC): 1.800.424.9300 (USA)  
+1.703.527.3887 (INT)

### 3. COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical identity:	Ethylene Glycol Monoethyl Ether
Common name / Synonym:	Ethylene glycol monoethyl ether; Ethyl glycol
CAS number:	110-80-5
EINECS number:	203-804-1
ICSC number:	0060
RTECS #:	KK8050000
UN #:	1171
EC #:	603-012-00-X

% Weight	Material	CAS
>99	Ethylene Glycol Monoethyl Ether	110-80-5

### 4. FIRST AID MEASURES

#### General advice

Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### Skin

Get medical aid. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing/shoes.

#### Inhalation

Remove person to fresh air. If signs/symptoms continue, get medical attention. Give oxygen or artificial respiration as needed.

#### Eyes

Thoroughly flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation persists, seek medical attention.

#### Ingestion

DO NOT induce vomiting. If vomiting does occur, have victim lean forward to prevent aspiration. Rinse mouth with water. Seek medical attention. Never give anything by mouth to an unconscious individual.

### 5. FIRE FIGHTING MEASURES

#### Suitable (and unsuitable) extinguishing media:

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

#### Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products):

Carbon oxides expected to be the primary hazardous combustion product.

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**Special protective equipment and precautions for firefighters:**

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Keep unopened containers cool by spraying with water.

**Unusual Fire and Explosion Hazards:**

- Vapors may travel to source of ignition and flash back.
- Vapors may settle in low or confined spaces.

**Flammable Properties**

**Classification**

OSHA/NFPA Class II Combustible Liquid.

**Flash point**

43 °C (110 °F) - closed cup

**Autoignition temperature**

235 °C (455 °F)

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## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:**

Wear respiratory protection. Do not inhale 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.

**Environmental precautions:**

Stop leak. Contain spill if possible and safe to do so. Prevent product from entering drains.

**Methods and materials for containment and cleaning up:**

Contain spill, then collect with an electrically protected vacuum cleaner or by wet-brushing and put the material into a convenient waste disposal container. Keep container closed.

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## 7. HANDLING AND STORAGE

**Precautions for safe handling:**

Do not get on skin or in eyes. Do not inhale vapor or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge.

**Conditions for safe storage, including any incompatibilities:**

Store in a cool, dry, well ventilated location. Containers that have been opened should be resealed and kept upright to prevent leakage.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Control parameters, e.g., occupational exposure limit values or biological limit values:**

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**Occupational Exposure Limits**

Component	Source	Type	Value	Note
Ethylene Glycol Monoethyl Ether	US (OSHA)	TWA	200 ppm, 740 mg/m <sup>3</sup>	29 CFR 1910.1000 Table Z-1 Limits for Air Contaminants
Ethylene Glycol Monoethyl Ether	US (ACGIH)	TWA	5 ppm	ACGIH Threshold Limit Value

**Appropriate engineering controls:**

General room or local exhaust ventilation is usually required to meet exposure limit(s). Electrical equipment should be grounded and conform to applicable electrical code.

**Individual protection measures, such as personal protective equipment:**

**Respiratory protection:**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose 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).

**Hand 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.

**Eye protection:**

Use chemical safety goggles and/or a full face shield where splashing is possible. Use equipment approved by appropriate government standards, such as NIOSH (US) or EN166 (EU) Maintain eye wash fountain and quick-drench facilities in work area.

**Skin and body protection:**

Wear impervious, flame retardant, antistatic protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**Hygiene measures:**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance (physical state, color, etc.)</b>	Liquid. Colorless.
<b>Odor</b>	Odorless
<b>Odor threshold</b>	Specific data not available
<b>pH</b>	Specific data not available
<b>Freezing point</b>	-90 °C (-130 °F)
<b>Initial boiling point and boiling range</b>	135 °C (275 °F)
<b>Flash point</b>	43 °C (110 °F) - closed cup

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Evaporation rate	Specific data not available
Flammability (solid, gas)	Combustible liquid
Upper / Lower flammability or explosive limits	15.6% (V) / 1.7% (V)
Vapor pressure	5.1 hPa (3.8 mmHg) at 20 °C (68 °F)
Vapor Density	3.0
Relative Density	0.93 g/mL at 25 °C (77 °F)
Solubility(ies)	completely miscible
Partition coefficient n-octanol/water(ies)	log Pow: -0.21
Auto-ignition temperature	235 °C (455 °F)
Decomposition temperature	Specific data not available
Formula (ETHYLENE GLYCOL MONOETHYL ETHER)	C4H10O2
Molecular Weight (ETHYLENE GLYCOL MONOETHYL ETHER)	90.12 g/mol

## 10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No data available
Conditions to avoid (e.g., static discharge, shock or vibration)	Heat, flames, and sparks.
Incompatible materials	Oxidizing agents, Copper
Hazardous decomposition products	Carbon oxides are expected to be, under fire conditions, the primary hazardous decomposition products.

## 11. TOXICOLOGICAL INFORMATION

- Ethylene Glycol Monoethyl Ether 110-80-5

### Product Summary:

Laboratory tests indicate that the product could have reproductive and teratogenic effects in humans. No data available to designate product as a mutagenic or aspiration hazard. No data available to designate product to cause specific target organ toxicity through single or repeated exposure.

### Acute Toxicity:

LC50 (Inhalation)	Rat	2,000 ppm	7 hours
LD50 (Dermal)	Rabbit	3,300 mg/kg	
LD50 (Oral)	Rat	2,125 mg/kg	

### Irritation:

#### Eyes

Rabbit - mild eye irritation - 24 hours

#### Respiratory or Skin Sensitization

No data available

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**Skin**

No data available

**Carcinogenicity**

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

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

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.

**Other Hazards**

Organ	Description
Eyes	Can be irritating to the eyes
Ingestion	Can be harmful through ingestion
Inhalation	Can be harmful, causing irritation to the respiratory tract, if inhaled.
Skin	Can be harmful, causing irritation, if absorbed through the skin.

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## 12. ECOLOGICAL INFORMATION

- Ethylene Glycol Monoethyl Ether 110-80-5

**Ecotoxicity (aquatic and terrestrial, where available):**

**Acute Fish Toxicity (ETHYLENE GLYCOL MONOETHYL ETHER)**

LC50 / 96 hours Bluegill - >10,000 mg/L

**Toxicity to Daphnia (ETHYLENE GLYCOL MONOETHYL ETHER)**

EC50 / 48 hours Daphnia - 1,893 mg/L

**Persistence and degradability:**

No data available

**Bioaccumulative potential:**

No data available

**Other adverse effects:**

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No data available

### 13. DISPOSAL CONSIDERATIONS

**Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging:**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

### 14. TRANSPORT INFORMATION

**Description of waste residues and information on their safe handling and methods of disposal:**

<b>UN number</b>	1171
<b>UN proper shipping name</b>	Ethylene glycol monoethyl ether
<b>Transport hazard class(es)</b>	3
<b>Packing group (if applicable)</b>	III

**Reportable Quantity**

1,000 lbs

**IMDG**

UN-Number: 1171 Class: 3 Packing Group: III

EMS-No: F-E, S-D

Proper shipping name: ETHYLENE GLYCOL MONOETHYL ETHER

Marine pollutant: No

**IATA**

UN-Number: 1171 Class: 3 Packing Group: III

Proper shipping name: Ethylene glycol monoethyl ether

### 15. REGULATORY INFORMATION

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

**OSHA Hazards**

Combustible liquid, Reproductive hazard, Target organ effect, Teratogen

All ingredients are on the following inventories or are exempted from listing

<b>Country</b>	<b>Notification</b>
Australia	AICS
Canada	DSL
China	IECS
European Union	EINECS



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Japan	ENCS/ISHL
Korea	ECL
New Zealand	NZIoC
Philippines	PICCS
United States of America	TSCA

**SARA 302 Components**

SARA 302: 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: ETHYLENE GLYCOL MONOETHYL ETHER CAS-No. 110-80-5 Revision Date 1993-04-24

**SARA 311/312 Hazards**

Chronic Health Hazard  
Fire Hazard

**CERCLA**

Ethylene glycol monoethyl ether CAS-No. 110-80-5, RQ: 1,000 lbs

**Massachusetts Right To Know Components**

Ethylene glycol monoethyl ether CAS-No. 110-80-5 Revision Date 1993-04-24

**Pennsylvania Right To Know Components**

Ethylene glycol monoethyl ether CAS-No. 110-80-5 Revision Date 1993-04-24

**New Jersey Right To Know Components**

Ethylene glycol monoethyl ether 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. ETHYLENE GLYCOL MONOETHYL ETHER CAS-No. 110-80-5 Revision Date 2009-02-01

**16. OTHER INFORMATION:  
INCLUDING INFORMATION ON PREPARATION AND REVISION OF THE SDS**

**Disclaimer**

PHARMCO-AAPER believes that the information on this MSDS was obtained from reliable sources. However, the

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