

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

SAFETY DATA SHEET

Triethylene glycol (TEG)

1. IDENTIFICATION OF SUBSTANCE / MIXTURE AND OF SUPPLIER

Product Identifier: High Purity Chemicals
Synonyms: 2,2'-[ethane-1,2-diylbis(oxy)]diethanol; Triglycol; TEG
Other means of identification: CAS No. 112-27-6
EINECS No. 203-953-2

Recommended use of the chemical and restrictions on use:
General solvent use.

Supplier Details:

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

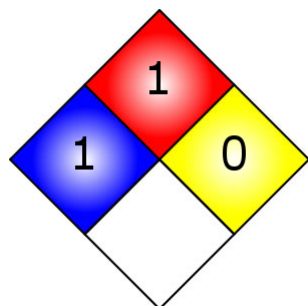
Pharmco Products, Inc.
58 Vale Road, Brookfield,
CT 06804, USA.
Tel: 203.740.3471
Fax: 203.740.3481
CCN17213

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

2. HAZARDS IDENTIFICATION

OSHA Hazards:
Irritant

NFPA



Signal Word:
WARNING!

Other hazards which do not result in classification:

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Potential Health Effects:

Organ	Description
Eyes	May cause eye irritation.
Ingestion	May be harmful if ingested.
Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical identity:	Triethylene glycol
Common name / Synonym:	Triglycol
CAS number:	112-27-6
EINECS number:	203-953-2
ICSC number:	1160
RTECS #:	YE4550000

% Volume	Material	CAS
100	Triethylene Glycol	112-27-6

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

Wash skin with soap and copious amounts of water. Seek medical attention.

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. Seek medical attention.

Ingestion

NEVER give anything by mouth to an unconscious person. If vomiting does occur, have victim lean forward to prevent aspiration. Rinse mouth with water. Immediately have victim drink large amounts of water to dilute. Seek medical attention.

Note to Physician

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Treat in accordance to symptoms (decontamination, vital functions), no known specific antidote.

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.

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.

Flammable Properties

Classification

Not flammable or combustible.

Flash point

177°C (350°F)

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment. Do not inhale vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe 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:

Absorb with an inert dry material and place in an appropriate waste disposal container. Keep disposal containers closed when finished.

7. HANDLING AND STORAGE

Precautions for safe handling:

Do not get on skin or in eyes. Do not inhale vapor or mist. Take normal fire prevention measures.

Conditions for safe storage, including any incompatibilities:

Keep container tightly closed in a cool, dry and well-ventilated place. Product is hygroscopic.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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

Occupational Exposure Limits

Component	Source	Type	Value	Note
Triethylene Glycol	/		No exposure limits.	

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:

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

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

Appearance (<i>physical state, color, etc.</i>)	viscous liquid. colorless.
Odor	mild
Freezing point	-7 °C (19 °F)
Initial boiling point and boiling range	286°C (546°F)
Flash point	176°C (348.8°F) - Open container
Upper / Lower flammability or explosive limits	0.9 %(V - lower) / 9.2 %(V - upper)
Vapor pressure	< 1 hPa (< 1 mmHg) at 20 °C (68 °F)
Vapor Density	5.2 (Air =1)
Relative Density	1.124 g/mL at 20 °C (68 °F)
Solubility(ies)	completely soluble in water
Formula (Triethylene glycol)	C ₆ H ₁₄ O ₄
Molecular Weight (Triethylene glycol)	150.17 g/mol

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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)	No data available
Incompatible materials	Strong oxidizing agents, strong acids
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. - Carbon oxides

11. TOXICOLOGICAL INFORMATION

- Triethylene glycol 112-27-6

Product Summary:

Lab tests have shown teratogenic and reproductive toxicity effects. No data available for mutagenic effects of this product.

Acute Toxicity:

LD50 (Dermal)	Rabbit	> 22500 mg/kg	
LD50 (Dermal)	Rabbit	> 5 g/kg	
LD50 (Oral)	Rat	17000 mg/kg	

Irritation:

Skin

Rabbit - mild irritation - 24 hours

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	Causes eye irritation.

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Ingestion	Harmful if ingested.
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Skin	Harmful if absorbed through skin. Causes skin irritation.

12. ECOLOGICAL INFORMATION

- Triethylene glycol 112-27-6

Ecotoxicity (aquatic and terrestrial, where available):

Acute Daphnia Toxicity (TRIETHYLENE GLYCOL)

EC50 / 48h / Water flea - 46500mg/l

Acute fish toxicity (TRIETHYLENE GLYCOL)

LC50 / 96h / Golden orfe - > 100 mg/l

Acute Fish Toxicity (TRIETHYLENE GLYCOL)

LC50 / 24 hours / Goldfish - > 5000mg/l

Persistence and degradability:

Biodegradation is expected.

13. DISPOSAL CONSIDERATIONS

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

Offer surplus and non-recyclable solutions to a licensed disposal company

14. TRANSPORT INFORMATION

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

UN number	Not a dangerous good.
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IMDG

UN-Number: Not a dangerous good.

Marine pollutant: No

IATA

UN-Number: Not a dangerous good.

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15. REGULATORY INFORMATION

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

OSHA Hazards

Irritant

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

Country	Notification
Australia	AICS
Canada	DSL
China	IECS
European Union	EINECS
Japan	ENCS/ISHL
Korea	ECL
New Zealand	NZIoC
Philippines	PICCS
United States of America	TSCA

SARA 302 Components

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

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

No SARA Hazards

CERCLA

No chemicals in this material with known CAS numbers are subject to the reporting requirements of CERCLA

Pennsylvania Right To Know Components

2,2'-(Ethylenedioxy)diethanol CAS-No. 112-27-6 Revision Date 1989-08-11

New Jersey Right To Know Components

2,2'-(Ethylenedioxy)diethanol CAS-No. 112-27-6 Revision Date 1989-08-11

California Prop 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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

Disclaimer

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