

Triethylene Glycol

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Triethylene Glycol

Synonyms/Generic Names: Triglycol; 2,2'-[1,2-Ethanediy]bis(oxy)]bisethanol

Product Number: 5965

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information: 920-623-2140 (Monday-Friday 8:00-4:30)
www.columbuschemical.com

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: No known OSHA hazards

Target Organs: None

Signal Word: Warning

Pictograms:



GHS Classification:

Skin irritation	Category 3
Eye irritation	Category 2B

GHS Label Elements, including precautionary statements:

Hazard Statements:

H316	Causes mild skin irritation.
H320	Causes eye irritation.

Precautionary Statements:

P264	Wash hands thoroughly after handling.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.

Potential Health Effects

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

NFPA Ratings

Health	1
Flammability	0
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	1
Fire	0
Reactivity	0
Personal	Not Available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Triethylene Glycol	>97	112-27-6	203-953-2	C ₆ H ₁₄ O ₄	150.17 g/mol
Diethylene Glycol	<3	111-46-6	203-872-2	C ₄ H ₁₀ O ₃	106.12 g/mol

4. FIRST-AID MEASURES

Eyes	Rinse with plenty of water for at least 15 minutes and seek medical attention if necessary.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if necessary.
Skin	Flush with plenty of water and wash using soap. Get medical attention if necessary.
Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention if necessary.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	May be combustible at high temperature. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Use appropriate media for adjacent fire. Cool unopened containers with water.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	Emits toxic fumes (carbon oxides) under fire conditions. (See also Stability and Reactivity section).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of aerosols.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well ventilated area. Hygroscopic. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls: Contains no substances with occupational exposure limit values.

Personal Protection

Eyes	Wear chemical safety glasses or goggles.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, and apron or lab coat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Other	Not Available

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Clear, colorless, viscous liquid.
Odor	Not Available
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	-4.3 °C (24.3 °F)
Initial boiling point and boiling range	285 °C (545 °F)
Flash point	Closed cup: 177°C (350.6°F)
Evaporation rate	0.001
Flammability (solid, gas)	Not Available
Upper/lower flammability or explosive limit	Lower: 0.9% Upper: 9.2%
Vapor pressure	< 1 hPa (< 1 mmHg) at 20°C (68°F)
Vapor density	5.18 (Air = 1.0)
Density	1.124-1.127 g/mL at 20°C (68°F)
Solubility (ies)	Completely soluble in water, methanol, diethyl ether.
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	370 °C (698 °F)
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Excessive heat, flames.
Incompatible Materials	Strong oxidizing agents, strong acids.
Hazardous Decomposition Products	Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Triethylene Glycol

Skin	LD50 Dermal - rabbit - > 22,500 mg Skin - Human - Mild skin irritation - Patch Test 24 Hrs. Skin - rabbit - Mild skin irritation - 24 h
Eyes	Eyes - rabbit - Mild eye irritation
Respiratory	Not Available
Ingestion	LD50 Oral - rat - 17,000 mg/kg

2,2'-Oxydiethanol

Skin	LD50 Dermal - rat - > >4.6 mg/kg
Eyes	Not Available
Respiratory	LC50 Inhalation - rat
Ingestion	LD50 Oral - rat - 17,000 mg/kg

Carcinogenicity

IARC	Category 4: 2,2'-Oxydiethanol
ACGIH	No components 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 components 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 components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Irritation, redness.
Eyes	Irritation, redness, watering eyes.
Respiratory	Irritation, coughing.
Ingestion	Irritation, nausea, vomiting, diarrhea, headache.

Chronic Toxicity	Not Available
Teratogenicity	Developmental Toxicity - rat – Oral: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Musculoskeletal system.
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	Inhalation - May cause respiratory irritation.
Reproductive Toxicity	Reproductive toxicity - mouse – Oral: Effects on Newborn: Growth statistics (e.g., reduced weight gain) and physical effects.
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Triethylene Glycol

Aquatic Vertebrate	LC50 - <i>Leuciscus idus</i> (Golden orfe) - > 100 mg/l - 96 h
Aquatic Invertebrate	EC50 - <i>Daphnia magna</i> (Water flea) - 46,500 mg/l - 48 h
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Not Available

13. DISPOSAL CONSIDERATIONS

Waste Product or Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residue.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	Not Dangerous Goods
TDG	Not Dangerous Goods
IMDG	Not Dangerous Goods
Marine Pollutant	No
IATA/ICAO	Not Dangerous Goods

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Listed: Diethylene Glycol
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Acute Health Hazard, Chronic Health Hazard
SARA 312	Acute Health Hazard, Chronic Health Hazard
SARA 313	Listed: Diethylene Glycol
WHMIS Canada	Not Listed

16. OTHER INFORMATION

Revision	Date
Revision 1	02/08/2013
Revision 2	03/08/2016
Revision 3	09/27/2018

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