

SAFETY DATA SHEET

POLYCLEAN

Gen. Variant: SDS_AMER

Version 1.1 Revision Date 11/21/2022

SDS No.: 3362

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Trade name : POLYCLEAN
CAS Number: : 112-27-6
Chemical characterization : Ethylene glycols
Chemical name : 2,2'-[1,2-ethanediylbis(oxy)]bis-ethanol
Synonyms : 1,2-Bis(2-hydroxyethoxy)ethane, Ethylene glycol dihydroxydiethyl ether

Identified uses : Intermediate; Functional Fluids

Prohibited uses : Aerosol applications such as theater fogs, linen sprays, pepper sprays, air sanitizers; Chafing fuels for warming foods; Deicer applications for use on roadways and pedestrian walkways; Manufacture/Formulation of deicer or anti-icing products for use on aircraft or runways

Company Address

TW Solutions, LLC
3695 Pinto Road
Kalamazoo, MI
49004

Company Telephone

Customer Service 269-998-5836

Emergency telephone number

CHEMTREC USA 800-424-9300

2. HAZARDS IDENTIFICATION

GHS-Classification

Specific target organ toxicity - single exposure

Category 3

GHS-Labeling

Symbol(s) :



Signal word : Warning

Hazard Statements : H335 May cause respiratory irritation.

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Precautionary Statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P271 Use only outdoors or in a well-ventilated area.

Response:
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 Call a POISON CENTER/doctor if you feel unwell.

Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P235 Keep cool.

Other hazards

No additional information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Components

Chemical name	CAS-No. EC-No.	<u>Weight %</u>	Component Type
Triethylene Glycol	112-27-6	>= 99.0 %	A
Diethylene Glycol	111-46-6	<1.0 %	C
Tetraethylene Glycol	112-60-7	<1.0 %	C

Key:
(A) Substance
(C) Impurity

4. FIRST AID MEASURES

General advice : Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. For specific information refer to the Emergency Overview in Section 2 of this SDS.

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- If inhaled : Remove person to fresh air. If signs/symptoms continue, get medical attention.
Monitor for respiratory distress and loosen any tight clothing such as a collar, tie, belt, or waistband.
- In case of skin contact : Immediately remove excess chemical and contaminated clothing; thoroughly wash contaminated skin with mild soap and water. If irritation persists after washing, seek medical attention. Thoroughly clean contaminated clothing before reuse; discard contaminated leather goods (gloves, shoes, belts, wallets, etc.).
- In case of eye contact : Immediately flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower lids. If pain or irritation persists, promptly obtain medical attention.
- If swallowed : Never give anything by mouth to an unconscious person. If swallowed, do not induce vomiting. Give large quantities of water. (If available, give several glasses of milk.) If vomiting occurs spontaneously, keep airway clear and give more water. Get medical attention immediately.

Notes to physician

- Symptoms : Respiratory irritation
- Hazards : May cause respiratory irritation.
- Treatment : Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.
No detoxification information available.

5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : SMALL FIRE: Use dry chemicals, CO₂, water spray or alcohol-resistant foam
LARGE FIRE: Use water spray, water fog or foam. DO NOT use straight streams
Water may be ineffective, but should be used to keep fire-exposed containers cool.

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- Specific hazards during fire fighting : Airborne mists from this substance are a moderate fire and explosion hazard.
Fine sprays/mists may be combustible at temperatures below normal flash point.
Avoid sparks, heat, and open flame.
Vapors can travel to a source of ignition and flash back.
Move containers from fire area if it can be done without risk.
Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
Cool containers with flooding quantities of water until well after fire is out.
Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
Always stay away from tanks engulfed in fire.
For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.
- Special protective equipment for fire-fighters : Wear an approved positive pressure self-contained breathing apparatus and firefighter turnout gear.

6. ACCIDENTAL RELEASE MEASURES

- Methods for containment / Methods for cleaning up : Contain spill with dike to prevent entry into sewers or waterways.
For large spills, dike and pump into properly labeled containers for reclamation or disposal. For small spills, soak up with absorbent material and place in properly labeled containers for disposal.
All recovered material should be packaged, labeled, transported and disposed of or reclaimed in conformance with applicable laws and regulations and in conformance with good engineering practices. Reclaim where possible.
- Additional advice : See Section 15: Regulatory Information.

7. Handling and storage

Precautions for safe handling

- Advice on safe handling : Containers, even those that have been emptied, will retain product residue and vapor and should be handled as if they were full. Do not eat, drink or smoke in areas where this material is used.
After handling, always wash hands thoroughly with soap and

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water.

Do not handle near heat, sparks, or flame. Avoid contact with incompatible agents. Use only with adequate ventilation/personal protection. Avoid contact with eyes, skin and clothing. Do not enter storage area unless adequately ventilated. Metal containers involved in the transfer of this material should be grounded and bonded.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store containers in a cool, dry, ventilated, fire resistant area away from sources of ignition and incompatible materials. Keep container tightly closed and properly labeled.

Specific end use(s)

: See Section 1.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Ingredients with workplace control parameters

Consult local authorities for acceptable exposure limits.

Exposure controls

Engineering measures

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

Personal protective equipment

Hand protection : Wear chemical resistant gloves such as rubber, neoprene or vinyl.

Eye and face protection : Eye protection such as chemical splash goggles and/or face shield must be worn when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapor.

Skin and body protection : Appropriate protective clothing should be worn to prevent skin contact.

Hygiene measures : Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics

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of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use.

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Use good personal hygiene practices.

Wash hands before eating, drinking, smoking, or using toilet facilities.

Take off contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Color	: Clear
Odor	: Little or no odor.
Odor Threshold	: Not applicable
Flash point	: 157 °C at 1,013 hPa (760 mm Hg) Method: Pensky-Martens Closed Cup
Lower explosion limit	: 0.9 vol%
Upper explosion limit	: 9.2 vol%
Flammability (solid, gas)	: Not applicable
Oxidizing properties	: Not considered an oxidizing agent.
Autoignition temperature	: 347 °C at 1,013 hPa
Decomposition temperature	: 243 °C
Melting point/freezing point	: -7 - -4 °C
Boiling point/boiling range	: 285 °C at 1,013 hPa
Vapor pressure	: 0.0 hPa at 20 °C
Density	: 1.13 g/cm ³ at 15 - 20 °C (Water = 1)

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Water solubility : Miscible in water.

Partition coefficient: n-octanol/water : log Pow: -1.75

Viscosity, kinematic : 42.3 mm²/s
at 20 °C

Relative vapor density : 5.17
(Air = 1.0)

Explosive properties : Not considered explosive

10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Conditions to avoid : None.

Materials to avoid : Oxidizers, Acids, Alkalis

Hazardous decomposition products : Not expected to decompose under normal conditions.

Thermal decomposition : ~243 °C
Carbon oxides (CO, CO₂), Gives off irritating and/or toxic gases in a fire.

11. TOXICOLOGICAL INFORMATION

Product Summary : The below given information is based on the assessment of the product including impurities.

Acute toxicity

Acute oral toxicity : Based on acute toxicity values, not classified.
Ingestion of high doses may cause CNS depression (fatigue, dizziness and possibly loss of concentration, with collapse, coma and death in cases of severe over-exposure).

: LD50: > 2,000 mg/kg
Species: Rat

Acute inhalation toxicity : Based on acute toxicity values, not classified.
Saturated vapor/aerosols may cause eye, nasal and respiratory tract irritation.

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: LC50: > 5 mg/l
Exposure time: 4 HOURS
Species: Rat

Acute dermal toxicity : Based on acute toxicity values, not classified.

: LD50: > 5,000 mg/kg
Species: Rabbit

Skin corrosion/irritation : Based on skin irritation values, not classified.
May cause slight transient skin irritation.

Serious eye damage/eye irritation : Based on eye irritation values, not classified.
May cause slight transient eye irritation.

Respiratory or skin sensitization : Respiratory sensitization
Not classified
no data available

: Skin sensitization
Not classified
no data available

Chronic toxicity

Carcinogenicity : Not classified
Contains a substance that has a positive carcinogenicity study.
Inconsistent reports of bladder tumors in rats that received chronic high oral exposure to diethylene glycol cannot be attributed to diethylene glycol and are not evidence of a primary carcinogenic effect but rather due to the development of bladder stones and their mechanical damage.

Germ cell mutagenicity : Not classified
Tetraethylene glycol may cause genotoxicity. Chromosomal aberrations were observed in vitro, whereas in vivo findings were negative (dominant lethal test) or equivocal (bone marrow chromosome aberrations in rats, peripheral blood micronucleus test in mice).

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Reproductive toxicity

Effects on fertility / : Not classified
Effects on or via lactation : No adverse effect observed.

Effects on Development : Not classified
May be toxic to embryo/fetal development at high oral doses.

Target Organ Systemic Toxicant - Single exposure : Classified, May cause respiratory irritation.

: Exposure routes: Inhalation
Target Organs: Respiratory Tract

Target Organ Systemic Toxicant - Repeated exposure : Based on repeated exposure toxicity values, not classified.

Aspiration hazard : Based on physico-chemical values or lack of human evidence, not classified.

12. Ecological information

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Based on acute aquatic toxicity values, not classified.

Long-term (chronic) aquatic hazard : Not classified, based on conclusive test data.

Toxicity to fish : Low acute toxicity to fish

Toxicity to daphnia and other aquatic invertebrates : Low acute toxicity to aquatic invertebrates.

Toxicity to algae : Low toxicity to algae.

Toxicity to bacteria : Low toxicity to sewage microbes.

Toxicity to fish (Chronic toxicity) : Low chronic toxicity to fish.

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Low chronic toxicity to aquatic invertebrates.

Persistence and degradability

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Biodegradability : Expected to be biodegradable
Rapid biodegradability has not been clearly demonstrated, but expected to be inherently biodegradable.

Stability in water : Not expected to hydrolyze readily.

Stability in soil : Low potential for soil adsorption expected

Bioaccumulative potential

Bioaccumulation : This material is not expected to bioaccumulate.

: Bioconcentration factor (BCF): 3.16
(QSAR calculated value)

Mobility in soil

Distribution among environmental compartments : no data available

Other adverse effects

Environmental fate and pathways : No additional information available.

Other information

Additional ecological information : No additional information available.

13. Disposal considerations

Waste treatment methods

Product : Contaminated product, soil, water, container residues and spill cleanup materials may be hazardous wastes.
Comply with applicable local, state or international regulations concerning solid or hazardous waste disposal and/or container disposal.

14. TRANSPORT INFORMATION

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IATA

: Not Supported
: If transportation information is required, please contact
Logistics Compliance at: dangerousgoods@lyb.com

Proper shipping name POLYCLEAN, not regulated

15. REGULATORY INFORMATION

Other international regulations

Global Inventory Status

The ingredients of this product are compliant with the following chemical inventory requirements or exemptions.

*Additional Explanatory Status Statements follow the table, as necessary.

Country/Region	Inventory	Status Description
Australia	AICS	Compliant
Canada	DSL	Compliant
China	IECSC	Compliant
Europe	REACH	See REACH Compliance Statement
Japan	ENCS	Compliant
Korea	KECI	Compliant
New Zealand	NZIoC	Compliant
Philippines	PICCS	Compliant
United States of America	TSCA	Compliant
Taiwan	TCSCA	Compliant

REACH status

If the product has been purchased from any company of the TW Solutions, LLC registered in the European Union, we confirm that the chemical substance in this product has been registered under REACH, in accordance with the deadlines set forth in REACH. (Regulation (EU) No. 1907/2006)

16. OTHER INFORMATION

Material safety datasheet sections which have been updated:

Revised Section(s):

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Numerical Data Presentation

The presentation of numerical data, such as that used for physical and chemical properties and toxicological values, is expressed using a comma (,) to separate digits into groups of three and a period (.) as the decimal marker. For example, 1,234.56 mg/kg = 1 234,56 mg/kg.

Language Translations

The information presented in this document has been translated from English by a vendor TW Solutions, LLC believes to be reliable. TW Solutions, LLC and its vendor have made a good-faith effort to verify the accuracy of the translation, but assume no liability or other responsibility for any errors that may have occurred.

End of Material Safety Data Sheet