

Safety Data Sheet

Ethylene Glycol

Section 1 - Chemical Product and Company Identification

SDS Name: Ethylene Glycol

Catalog Numbers: SO-1027

Company Identification: Transene Company, Inc., DBA ROWLEY BIOCHEMICAL, Inc.
10 ELECTRONICS AVENUE
DANVERS, MA 01923

For information, call: 978-739-4883

Emergency Number: 800-424-9300

For CHEMTREC assistance, call: 800-424-9300

Section 2 - Hazards Identification

GHS Classifications

H302-Acute toxicity, oral: 4

H332-Acute toxicity, inhalation: 4

H361-Reproductive toxicity: 2

H370-Specific target organ toxicity, single exposure: 1

H372-Specific target organ toxicity, repeated exposure: 1

Pictograms or Hazard symbols and Hazard statement(s):



Signal Word: Danger

Hazard Statements:

H302-Harmful if swallowed

H332-Harmful if inhaled

H361-Suspected of damaging fertility or the unborn child

H370-Causes damage to organs (target organs: central nervous system, kidney, blood, and liver)

H372-Causes damage to organs through prolonged or repeated exposure (target organs: central nervous system, kidney, blood, and liver)

Precautionary Statements:

P201-Obtain special instructions before use.
P202-Do not handle until all safety precautions have been read and understood.
P260-Do not breathe dust/fume/gas/mist/vapours/spray.
P261-Avoid breathing dust/fume/gas/mist/vapours/spray.
P264-Wash 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-If swallowed: Call a Poison Center/doctor if you feel unwell.
P304+P340-If inhaled: Remove person to fresh air and keep comfortable for breathing.
P308+P311-If exposed or concerned: Call a Poison Center/doctor.
P308+P313-If exposed or concerned: Get medical advice/attention.
P312-Call a Poison Center/doctor if you feel unwell.
P314-Get medical advice/attention if you feel unwell.
P330-Rinse mouth.
P405-Store locked up.
P501-Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
107-21-1	Ethylene Glycol	≤100

Section 4 - First Aid Measures

Eye Exposure: In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Get medical advice.

Dermal Exposure: In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical advice.

Oral Exposure: If swallowed, seek immediate medical advice. Rinse mouth with water. Do not induce vomiting.

Inhalation Exposure: If inhaled, remove to fresh air. If breathing becomes difficult, get medical attention.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating gases may be generated by thermal decomposition or combustion.

Extinguishing Media: Use dry chemical, carbon dioxide, dry sand, water spray, or alcohol-resistant foam.

Hazardous Combustion Products: Carbon oxides, irritating and toxic fumes and gases.

Flash Point: 111 °C (231.8 °F) Closed Cup

Autoignition Temperature: 398 °C

Explosion Limits, Lower: 3.2 vol%

Upper: 15.3 vol%

NFPA Rating: (estimated) Health: 2; Flammability: 1; Instability: 0

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s):

Wear personal protective equipment. Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Ensure adequate ventilation.

Methods for Cleaning up: Absorb with sand, earth, or vermiculite. Carefully sweep up and containerize for proper disposal. Provide ventilation. Eliminate all sources of ignition. Do not release to the environment. Do not release to drains.

Section 7 - Handling and Storage

Use care when handling. Wash thoroughly after handling. Wear personal protective equipment. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Store in a cool, dry, and well-ventilated area. Keep in a tightly closed container. Keep away from heat, flames, sparks, and all sources of ignition. Keep away from incompatible materials.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

Exposure Limits:

Chemical Name	ACGIH - TLV	NIOSH - IDLH	OSHA - PEL
Ethylene Glycol CAS#107-21-1	25 ppm TWA 50 ppm STEL 10 mg/m ³ STEL	Not listed	50 ppm Ceiling (vacated) 125 mg/m ³ Ceiling (vacated)

Section 9 - Physical and Chemical Properties

Physical State: Viscous Liquid

Appearance: Colorless, Clear

Odor: Odorless

Vapor Pressure: 0.1 hPa at 25°C

Odor Threshold: Not available

Vapor Density: 2.14 (Air=1)

pH: 5.5-7.5 (50% Aqueous Solution)

Relative Density: 1.1 at 20°C

Melting point/freezing point: -13°C (8.6°F)

Solubility: Completely miscible

Boiling Point: 197.4°C (387.3°F) at 1013.25 hPa

Flash Point: 111°C (231.8°F) Closed Cup

Evaporation Rate: 1

Flammability (solid, gas): Not applicable

Partition coefficient: n-octanol/water: log Pow: -1.36

Autoignition Temperature: 398°C

Decomposition Temperature: >500°C

Viscosity: 21 cP at 20°C

Specific Gravity/Density: 1.113

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, ignition sources, and excess heat. Exposure to moist air or water.

Incompatibilities with Other Materials: Strong oxidizing agents, strong acids, strong bases, aldehydes, permanganates, peroxides, dichromates, reactive sodium compounds, sulfur compounds, various plastics.

Hazardous Decomposition Products: Carbon oxides, irritating and toxic fumes and gases.

Section 11 - Toxicological Information

CAS#107-21-1 Ethylene Glycol: RTECS#: KW2975000

LD50 Oral: 7712 mg/kg (rat)

LD50 Oral: 500.1 mg/kg (external SDS)

LD50 Dermal: 10600 mg/kg (rat)

LC50 Inhalation: >2.5 mg/L 6h aerosol (rat)

Carcinogenicity: Ethylene Glycol CAS#107-21-1 is not listed by IARC, NTP, ACGIH, or OSHA. Ethylene Glycol is listed by California Prop. 65 as a developmental carcinogen (birth defects or other reproductive harm).

Information on the likely routes of exposure: Routes of entry anticipated: oral, dermal, inhalation, and eye.

Epidemiology: Not available

Teratogenicity: Laboratory experiments have shown teratogenic effects.

Reproductive Effects: Overexposure may cause reproductive disorder(s) based on tests with laboratory animals. Suspected of damaging fertility or the unborn child.

Developmental Effects: Not available.

Neurotoxicity: Not available.

Mutagenicity: Not available.

Specific Target Organ Toxicity, Single Exposure: Central nervous system, kidney, blood, and liver.

Specific Target Organ Toxicity, Repeat Exposure: Central nervous system, kidney, blood, and liver.

Symptoms associated with exposure: Harmful if inhaled. Harmful if swallowed. Early symptoms mimic alcohol inebriation followed by nausea, vomiting, abdominal pain, weakness, muscle tenderness, respiratory failure, convulsions, cardiovascular collapse, pulmonary edema, metabolic acidosis, and/or CNS depression. Exposure causes damage to organs (CNS, kidney, blood, liver). Suspected of damaging fertility or the unborn child.

The toxicological properties of this material have not been thoroughly investigated.

Section 12 - Ecological Information

Ecotoxicity: Do not release to the environment. Do not release to drains.

CAS#107-21-1 Ethylene Glycol:

LC50, freshwater fish: >72860 mg/L 96h static (pimephales promelas)(fathead minnow)

LC50, freshwater fish: 27540 mg/L 96h static (Iepomis macrochirus)(bluegill)

LC50, freshwater fish: 40761 mg/L 96h static (oncorhynchus mykiss)(rainbow trout)

EC50, water flea: >100 mg/L 48h static (daphnia magna)

Persistence and degradability: Readily biodegradable. (Biodegradation 90-100%, 10d exposure time, aerobic.)

Bio-accumulative potential: This material is not expected to bioaccumulate based on available information.

Mobility: Will likely be mobile in the environment due to its water solubility.

Section 13 - Disposal Considerations

DISPOSAL: Dispose of in accordance with all federal, state, and local regulations.

Section 14 – Transport Information

DOT

Non-Regulated

Section 15 - Regulatory Information

Canada Regulatory Information

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the SDS contains all the information required by the CPR.

Section 16 - Additional Information

SDS Creation Date: 10/15/12

Revision #1: 6/11/14 RC

Revision #2: 7-31-20

Revision #3: 6-22-23

Revision #4: 1-5-26

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