

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product form: Substance

Product Name: Ethylene glycol

1.2. Intended Use of the Product: Industrial chemical

1.3. Name, Address, and Telephone of the Responsible Party

Company

High Precision Gas LLC
 10770 Painter Avenue
 Santa Fe Springs, CA 90670
 714-868-6525

www.highprecisiongas.com

1.4. Emergency Telephone Number

Emergency Number : Professional Emergency Resource Services (PERS)
 (800) 633-8253 24 / 7 / 365

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Acute Tox. 4 H302

STOT RE 2 H373

Full text of hazard classes and H-statements : see section 16

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)



Signal Word (GHS-US)

: Warning

Hazard Statements (GHS-US)

: H302 – Harmful if swallowed.

H373 – May cause damage to organs (kidney) through prolonged or repeated exposure (if swallowed)

Precautionary Statements (GHS-US)

: P260 – Do not breathe dust / fume / gas / mist / vapors / spray

P264 – Wash skin thoroughly after handling

P270 – Do not eat, drink or smoke when using this product

P301+P312+P330 – If swallowed, call a poison center / doctor if you feel unwell. Rinse mouth.

P314 – Get medical advice / attention if you feel unwell

P501 - Dispose of contents/container to approved waste disposal plant in accordance with local, regional, national, and international regulations.

2.3. Other Hazards

No additional information.

2.4. Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Name	Synonyms	Product Identifier	%	GHS US classification
Ethanediol		(CAS-No.) 107-21-1	100	Acute Tox. 4 (Oral): H302 STOT RE 2: H373

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

First-aid Measures General: Move out of dangerous area. Take off contaminated clothing.

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First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if symptoms persists.

First-aid Measures After Skin Contact: Immediately drench affected area with water for at least 15 minutes. Immediately remove contaminated clothing. If exposed or concerned: Get medical advice/attention.

First-aid Measures After Eye Contact: Immediately rinse with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

Symptoms/Injuries: May cause drowsiness, dizziness, fatigue, vertigo, agitation, diarrhea, vomiting, nausea and unconsciousness.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

None.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂). Water may be ineffective but water should be used to keep fire-exposed container cool.

Unsuitable Extinguishing Media: Do not use a heavy water stream such as water jet. A heavy water stream may spread burning liquid.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Highly flammable (combustible) liquid and vapor.

Explosion Hazard: May form flammable or explosive vapor-air mixture.

Reactivity: Reacts violently with strong oxidizers. Increased risk of fire or explosion.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂).

Other Information: Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not breathe vapor, mist or spray. Do not get in eyes, on skin, or on clothing. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Use special care to avoid static electric charges.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel. Stop leak if safe to do so.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area. Eliminate ignition sources.

6.2. Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment. Collect spillage.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill. Absorb and/or contain spill with inert material. Do not take up in combustible material such as: saw dust or cellulosic material. Use only non-sparking tools.

6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Handle empty containers with care because residual vapors are flammable.

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Precautions for Safe Handling: Avoid contact with skin, eyes and clothing. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist, spray, vapors. Take precautionary measures against static discharge. Use only non-sparking tools.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Take action to prevent static discharges. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment.

Storage Conditions: Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store locked up/in a secure area. Store in a well-ventilated place. Keep container tightly closed. Keep in fireproof place.

Incompatible Materials: Strong acids, strong bases, strong oxidizers.

7.3. Specific End Use(s) No additional information available

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

Ethylene Glycol (107-21-1)		
USA ACGIH	ACGIH C (ppm)	50 ppm
USA ACGIH	ACGIH (C) (mg/m ³)	100 mg/m ³
USA OSHA	OSHA PEL (C) (ppm)	50 ppm

8.2. Exposure Controls

Appropriate Engineering Controls

: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Gas detectors should be used when flammable gases or vapors may be released. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment.

Personal Protective Equipment

: Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing

: Chemically resistant materials and fabrics. Wear fire/flame resistant/retardant clothing.

Hand Protection

: Wear protective gloves.

Eye and Face Protection

: Chemical safety goggles.

Skin and Body Protection

: Wear suitable protective clothing.

Respiratory Protection

: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information

: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State

: Liquid

Appearance

: Clear, Colorless – light yellow

Odor

: Odorless

Odor Threshold

: No data available

pH

: 9

Evaporation Rate

: No data available

Melting Point

: -14 – -12 °C at 1.013 hPa

Freezing Point

: -13 - -11.2 °C (9 - 11.8 °F)

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Boiling Point	: 197.4 °C (387.3 °F)
Flash Point	: 111 - 116 °C (232 - 241 °F)
Auto-ignition Temperature	: 398 °C
Decomposition Temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor Pressure	: <1 hPa @ 20 - 25 °C (68 - 77 °F)
Relative Vapor Density at 20°C	: No data available
Relative Density	: 1.11 g/cm ³ @ 20 °C (68 °F)
Solubility	: Soluble
Partition Coefficient: N-Octanol/Water	: log Pow: -1.36
Viscosity	: Dynamic - 19.83 - 21 mPa.s @ 20 - 25 °C (68 - 77 °F) Kinematic - 145 mm ² /s @ 25 °C (77 °F)

9.2. Other Information No additional information available

SECTION 10: STABILITY AND REACTIVITY

- 10.1. Reactivity:** No dangerous reaction know under conditions of normal use.
- 10.2. Chemical Stability:** Stable under normal conditions.
- 10.3. Possibility of Hazardous Reactions:** No hazards to be specially mentioned.
- 10.4. Conditions to Avoid:** Direct sunlight, extremely high or low temperatures, heat, hot surfaces, sparks, open flames, incompatible materials, and other ignition sources.
- 10.5. Incompatible Materials:** Strong bases, stong oxidizing agents, atong acids, aldehydes, aluminum, plastics, reducing agent and proxides.
- 10.6. Hazardous Decomposition Products:** Aldehydes, ketones, organic acids and carbon oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects

Acute Toxicity: Not classified

Ethylene Glycol (107-21-1)	
LD50 Oral Rat	> 3500 mg/kg
LD50 Dermal Rat	4.7 mg/kg

Skin Corrosion/Irritation: Not classified.

Serious Eye Damage/Irritation: Not classified.

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified.

Carcinogenicity: Not classified.

Reproductive Toxicity: Not classified.

Specific Target Organ Toxicity (Single Exposure): Not classified.

Specific Target Organ Toxicity (Repeated Exposure): May cause damage to organs (kidney) through prolonged or repeated exposure (if swallowed).

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: No data available.

Symptoms/Injuries After Skin Contact: Non-irritating.

Symptoms/Injuries After Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.

Symptoms/Injuries After Ingestion: Vomiting, nausea, liver and kidney damage.

Chronic Symptoms: No data available.

Other information: Other adverse effects – loss of righting reflex, and ataxia, unconsciousness, drowsiness and agitation.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General : Should not be classified as hazardous to aquatic enviroment.

Ethylene Glycol (107-21-1)	
LC50 Fish 1	>72.860 mg/l (Exposure time: 96 h - Species: Cichlid fish)
EC50 Daphnia 1	> 100 mg/l

12.2. Persistence and Degradability

Ethylene Glycol (107-21-1)	
Persistence and Degradability	The substance is readily biodegradable.

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12.3. Bioaccumulative Potential

Ethylene Glycol (107-21-1)	
Bioaccumulative Potential	Does not significantly accumulate in organisms.
Ethylene Glycol (107-21-1)	
Log Pow	-1.36

12.4. Mobility in Soil 0,013 Pa m³/mol at 25 °C

12.5. Other Adverse Effects

Other Information : No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste Treatment Methods

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, and international regulations. Do not re-use empty containers.

Additional Information: Handle empty containers with care. Do not empty into drains.

Ecology - Waste Materials: Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1. In Accordance with DOT Not regulated

Proper Shipping Name : ETHYLENE GLYCOL

14.2. In Accordance with IMDG Not regulated

Proper Shipping Name : ETHYLENE GLYCOL

14.3. In Accordance with IATA Not regulated

Proper Shipping Name : ETHYLENE GLYCOL

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

Ethylene Glycol (107-21-1)	
SARA Section 311/312 Hazard Classes	Health hazard - Specific target organ toxicity (single or repeated exposure) Health hazard - Carcinogenicity Physical hazard - Flammable (gases, aerosols, liquids, or solids) Health hazard - Serious eye damage or eye irritation Health hazard - Reproductive toxicity
SARA Section 313 Reporting	Component – Ethylene glycol CAS-No – 107-21-1 Weight% - >95 SARA 313 – Threshold Values % - 1.0
CERCLA	This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

15.2. US State Regulations

Ethylene Glycol (107-21-1)	
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know List U.S. - Pennsylvania - Right to Know List U.S. – Illinois – Right to Know List	
California Prop 65	
WARNING: This product can expose you to chemicals including 1,4-Dioxane, Acetaldehyde, which is/are known to the State of California to cause cancer, and Ethylene glycol, which is/are known to the State of California to cause birth defects or other reproductive harm. For more in-formation go to www.P65Warnings.ca.gov	

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SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision : 09/01/2019

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200

GHS Full Text Phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
STOT RE2	Specific target organ toxicity – Repeated exposure Category 2
H302	Harmful if swallowed
H373	May cause damage to organs through prolonged or repeated exposure

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)