Ethylene Glycol

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Ethylene Glycol

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: S25905

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive
Hanover, PA 17331
(717) 632-1291

Supplier Details:

Fisher Science Education
6771 Silver Crest Road, Nazareth, PA 18064
(724)517-1954

Emergency telephone number:

Fisher Science Education
Emergency Telephone No.: 800-535-5053

SECTION 2: Hazards identification

Classification of the substance or mixture:

Irritant

AcTox Oral 4.

Signal word: Warning

Hazard statements:
Harmful if swallowed.

Precautionary statements:
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
Rinse mouth.
Dispose of contents and container as instructed in Section 13.

Other Non-GHS Classification: None

SECTION 3: Composition/information on ingredients

Ingredients:

Ethylene Glycol

CAS 107-21-1	Ethylene Glycol	100 %
		Percentages are by weight

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists.

After skin contact:

Wash affected area with soap and water. Rinse/flush exposed skin gently using water for 15-20 minutes. Seek medical attention if irritation persists or if concerned.

After eye contact:

Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.

After swallowing:

Rinse mouth thoroughly. Have exposed individual drink sips of water. Seek medical attention if irritation, discomfort or vomiting persists. Induce vomiting.

Most important symptoms and effects, both acute and delayed:

Irritation. Nausea. Headache. Shortness of breath.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention, provide SDS document to physician.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

Water spray. Fog. Carbon dioxide. Dry chemical powder. Alcohol foam. Polymer foam. If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:

Combustion products may include carbon oxides or other toxic vapors.

Advice for firefighters:

Protective equipment: None

Additional information (precautions):

Move product containers away from fire or keep cool with water spray as a protective measure, where feasible.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Wear protective equipment. Use respiratory protective device against the effects of fumes/dust/aerosol. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources. Protect from heat. Stop the spill, if possible. Contain spilled material by diking or using inert absorbent. Transfer to a disposal or recovery container.

Environmental precautions:

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13.

Methods and material for containment and cleaning up:

If in a laboratory setting, follow Chemical Hygiene Plan procedures. Collect liquids using vacuum or by use of absorbents. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor. Do not flush to sewer.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Prevent formation of aerosols. Follow good hygiene procedures when handling chemical materials. Do not eat, drink, smoke, or use personal products when handling chemical substances. If in a laboratory setting, follow Chemical Hygiene Plan. Use only in well ventilated areas. Avoid splashes or spray in enclosed areas. Store away from water due to being very hydroscopic. Empty containers can still be hazardous since they retain product residue.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers. Keep container tightly sealed. Store with like hazards. Protect from freezing and physical damage.

SECTION 8: Exposure controls/personal protection

Control Parameters:	107-21-1, Ethylene Glycol, NIOSH 50 ppm Ceiling. 107-21-1, Ethylene Glycol, ACGIH 100 mg/m3 TWA (inhalable fraction and vapor).
Appropriate Engineering controls:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.
Respiratory protection:	Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present. Use suitable respiratory protective device when aerosol or mist is formed. For spills, respiratory protection may be advisable.
Protection of skin:	The glove material has to be impermeable and resistant to the product/ the substance/ the preparation being used/handled. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
Eye protection:	Safety glasses with side shields or goggles.
General hygienic measures:	The usual precautionary measures are to be adhered to when handling chemicals. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and skin.

SECTION 9: Physical and chemical properties

Ethylene Glycol

Appearance (physical state, color):	Colorless, oily liquid	**Explosion limit lower**: **Explosion limit upper**:	Lower explosion limit : 3.2 %(V) Upper explosion limit : 15.3 %(V)
Odor:	Odorless	**Vapor pressure at 20°C**:	0.11 hPa (0.08 mmHg) at 20 °C (68 °F) 0.13 hPa (0.10 mmHg) at 20 °C (68 °F), .06 mm at 20 °C (68 °F)
Odor threshold:	Not Determined	**Vapor density**:	2.14 - (Air = 1.0)
pH-value:	Not Determined	**Relative density**:	1.113 g/mL at 25 °C (77 °F)
Melting/Freezing point:	- 13 C	**Solubilities**:	Infinite solubility in water.
Boiling point/Boiling range:	197 C	**Partition coefficient (n-octanol/water)**:	Not Determined
Flash point (closed cup):	111 °C (232 °F) - closed cup	**Auto/Self-ignition temperature**:	362.8C
Evaporation rate:	Not Determined	**Decomposition temperature**:	Not Determined
Flammability (solid, gaseous):	flammable	**Viscosity**:	a. Kinematic: Not Determined b. Dynamic: Not Determined
Density at 20°C:	Not Determined		

SECTION 10: Stability and reactivity

Reactivity:

Nonreactive under normal conditions.

Chemical stability:

No decomposition if used and stored according to specifications.

Possible hazardous reactions: None

Conditions to avoid:

Store away from oxidizing agents, strong acids or bases. Excess heat , Incompatible Materials, Ignition source, or Flame.

Incompatible materials:

Strong acids, Strong oxidizing agents, Strong bases, Aldehydes, Aluminum. aliphatic amines. caustics.

Hazardous decomposition products:

Oxides of carbon, acrid and irritating fumes.

SECTION 11: Toxicological information

Acute Toxicity:

Oral:

4700 mg/kg Oral LD50 Rat

Dermal:

10600 mg/kg Dermal LD50 Rat

Chronic Toxicity: No additional information.
Skin corrosion/irritation: No additional information.
Serious eye damage/irritation: No additional information.
Respiratory or skin sensitization: No additional information.
Carcinogenicity: See section 15.
Germ cell mutagenicity: No additional information.
Reproductive Toxicity: No additional information.

STOT-single and repeated exposure: No additional information.
Additional toxicological information: No additional information.

SECTION 12: Ecological information

Ecotoxicity:

Freshwater Algae: 96 Hr EC50 Pseudokirchneriella subcapitata: 6500 - 13000 mg/L

Water Flea: 48 Hr EC50 Daphnia magna: 46300 mg/L

Freshwater Fish: 96 Hr LC50 Oncorhynchus mykiss: 41000 mg/L

Freshwater Fish: 96 Hr LC50 Oncorhynchus mykiss: 14 - 18 mL/L [static]

Freshwater Fish: 96 Hr LC50 Lepomis macrochirus: 27540 mg/L [static]

Freshwater Fish: 96 Hr LC50 Oncorhynchus mykiss: 40761 mg/L [static]

Freshwater Fish: 96 Hr LC50 Pimephales promelas: 40000 - 60000 mg/L [static]

Freshwater Fish: 96 Hr LC50 Poecilia reticulata: 16000 mg/L [static]

Persistence and degradability:

Slightly persistent in water, with 2 to 20 day half-life.

Bioaccumulative potential:

Not expected to significantly bioaccumulate.

Mobility in soil:

Aqueous solution has high mobility in soil.

Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Product/containers must not be disposed together with household garbage. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/ provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product. Have fire extinguishing agent available in case of fire. Eliminate all sources of ignition. Use non-sparking equipment. Absorb with inert material and place in container for disposal. Ventilate area of spill.

SECTION 14: Transport information

US DOT

UN Number:
ADR, ADN, DOT, IMDG, IATA 3082

Limited Quantity Exception: None

Bulk:
RQ (if applicable): None
Proper shipping Name: Environmentally hazardous sub stance, liquid, n.o.s. (Ethylene glycol).

Non Bulk:
RQ (if applicable): None
Proper shipping Name: Environmentally hazardous sub stance, liquid, n.o.s. (Ethylene glycol).

Ethylene Glycol

Hazard Class: None
Packing Group: III.
Marine Pollutant (if applicable): No
additional information.
Comments: None

Hazard Class: None
Packing Group: III.
Marine Pollutant (if applicable): No
additional information.
Comments: None

SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Acute, Chronic

SARA Section 313 (Specific toxic chemical listings):

107-21-1 Ethylene Glycol, Lab Grade.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

107-21-1 Ethylene Glycol 5000 lb.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and

regulations applicable to this material.

NFPA: 2-1-0
HMIS: 2-1-0
GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.
PNEC Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA Resource Conservation and Recovery Act (USA).
TSCA Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).

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