



VAPCO PRODUCTS, INC.

Safety Data Sheet Ethylene Glycol

SECTION 1: Identification

GHS Product identifier

Product name	Ethylene Glycol
Product number	EG-5, EG-55
Brand	Vapco

Recommended use of the chemical and restrictions on use
Heat transfer fluid

Supplier's details

Name	Vapco Products, Inc.
Address	401 Marshall Road Valley Park, Missouri 63088 United States
Telephone	(636) 923-2121
Fax	(636) 923-3002
email	info@VapcoProducts.com

Emergency phone number

(800) 255-3924

SECTION 2: Hazard identification

Classification of the substance or mixture

GHS classification in accordance with: OSHA (29 CFR 1910.1200)

- Acute toxicity, oral, Cat. 4
- Specific target organ toxicity (repeated exposure), Cat. 2

GHS label elements, including precautionary statements

Safety Data Sheet

Pictogram



Signal word

Warning

Hazard statement(s)

H302
H373

Harmful if swallowed
May cause damage to organs through prolonged or repeated exposure

Precautionary statement(s)

P260
P264
P270
P301+P312
P314
P330
P501

Do not breathe dust/fume/gas/mist/vapors/spray.
Wash hands and other exposed areas thoroughly after handling.
Do not eat, drink or smoke when using this product.
IF SWALLOWED: Call a POISON CENTER /doctor if you feel unwell.
Get medical advice/attention if you feel unwell.
Rinse mouth.
Dispose of contents/container to the specifications of local, regional, national, and international regulations.

SECTION 3: Composition/information on ingredients

Mixtures

Hazardous components

1. Ethylene glycol

Concentration	20 - 95 % (weight)
EC no.	203-473-3
CAS no.	107-21-1
Index no.	603-027-00-1

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice	Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
If inhaled	First, take proper precautions to ensure your own safety before attempting rescue (e.g. wear appropriate respiratory protective equipment, use the buddy system), then remove the exposed person to fresh air. Keep at rest in a position comfortable for breathing. Get medical advice/attention.
In case of skin contact	Immediately drench affected area with water for at least 15 minutes. Remove contaminated clothing immediately. Obtain medical attention if irritation develops or persists.
In case of eye contact	Immediately rinse with water for at least 15 minutes. Remove contact

Safety Data Sheet

lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

If swallowed Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

Most important symptoms/effects, acute and delayed

None known.

Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically. Treatment with ethyl alcohol is indicated if toxic ingestion is suspected or if there is metabolic acidosis following ingestion of this product. Administer ethyl alcohol sufficient to maintain blood ethyl alcohol levels of above 100 mg/dL. 4-Methylpyrazole (Fomepizole, Antizole) is also recognized antidote for this product. If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: Fire-fighting measures

Suitable extinguishing media

Water spray, carbon dioxide, foam, dry chemical. Use appropriate media for surrounding fire.

Specific hazards arising from the chemical

This material may decompose and produce irritating vapors and toxic gases (e.g. carbon oxides).

Special protective actions for fire-fighters

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

Firefighting Instructions: Use dry chemical, foam, or carbon dioxide (CO₂). Do not breathe fumes from fire or vapors from decomposition. Do NOT fight fire when fire reaches containers. Evacuate area. Fight fire remotely due to the risk of explosion. Shut off all sources of ignition. Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. Wear NIOSH-approved Self-Contained Breathing Apparatus with a full face piece operated in a positive pressure demand mode with full body protective clothing when fighting fires.

Hazardous Combustion Products: Carbon oxides.

Further information

Do not allow run-off from fire fighting to enter drain or water courses.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

General Measures: Do not get in eyes, on skin, or on clothing. Do not breathe vapors, spray, mist, gas. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.

For Non-Emergency Personnel

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

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

For Emergency Personnel

Emergency Procedure: Eliminate ignition source first, then ventilate the area. Evacuate unnecessary personnel, isolate, and ventilate area. 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.

Protective Equipment: Equip cleanup crew with proper protection.

Environmental precautions

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

Safety Data Sheet

Methods and materials for containment and cleaning up

Methods For Containment: Ventilate area. Contain any spills with dikes or absorbents to prevent further 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. Eliminate all ignition sources. Ventilate area. Stop the ignition source of the release, if safe to do so. Consider the use of water spray to disperse vapors. Isolate the area until gas has dispersed. Ventilate and gas test area before entering. Take up liquid spill into absorbent material. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

Waste Disposal: Dispose of in accordance with local, regional, national, and international regulations. Containers may be hazardous when empty. Do not flame cut, braze, or weld.

Reference to other sections

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

SECTION 7: Handling and storage

Precautions for safe handling

Precautions for Safe Handling: Do not handle until all safety precautions have been read and understood. Avoid contact with skin, eyes and clothing. Do not breathe gas, mist, spray, vapors. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not spray on open flame or other ignition source.

Additional Hazards When Processed: Do not pressurize, cut, or weld containers. Do not pierce or burn, even after use.

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

Other Precautions: Keep out of reach of children. Follow label instructions. Vapors may collect in low lying area.

Conditions for safe storage, including any incompatibilities

Technical Measures: Comply with applicable regulations. Proper grounding procedures to avoid static electricity should be followed.

Storage Conditions: Store in a dry, cool place. Keep only in the original container in a cool, well-ventilated place away from ignition sources. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store locked up/in a secure area.

Incompatibilities: Slightly reactive to oxidizing agents, alkalis.

SECTION 8: Exposure controls/personal protection

Control parameters

CAS: 107-21-1 (EC: 203-473-3)

Ethylene glycol

ACGIH (USA): 100 mg/m³ PEL-C inhalation; 100 mg/m³ PEL-C inhalation; 100 mg/m³ PEL-C inhalation;

Cal/OSHA (USA): 40 ppm, 100 mg/m³ PEL-C inhalation

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. Use explosion-proof equipment. Proper grounding procedures to avoid static electricity should be followed. Use only outdoors or in well-ventilated area. Ensure all local, regional, national, and international regulations are observed. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Safety Data Sheet

Individual protection measures, such as personal protective equipment (PPE)

Pictograms



Eye/face protection

Chemical safety goggles. Insufficient ventilation: wear respiratory protection. Respiratory protection of the dependent type.

Skin protection

Wear protective gloves and clothing.

Body protection

Wear suitable protective clothing. Wear protective gloves. Chemical resistant materials and fabrics. Wear fire/flame resistant/retardant clothing.

Respiratory protection

Use a NIOSH-approved Self-Containing Breathing Apparatus whenever exposure may exceed established Occupational Exposure Limits.

SECTION 9: Physical and chemical properties and safety characteristics

Basic physical and chemical properties

Physical state	Liquid
Appearance	Colorless liquid (color options)
Color	Variable
Odor	Odorless
Odor threshold	N/D
Melting point/freezing point	N/D
Boiling point or initial boiling point and boiling range	>100°C (>212°F)
Flammability	Not considered a flammable liquid by OSHA (29CFR 1910.1200)
Lower and upper explosion limit/flammability limit	N/D
Flash point	N/D
Auto-ignition temperature	N/D
Decomposition temperature	N/D
pH	8-10
Kinematic viscosity	>1.0 cP at 25°C (77°F)
Solubility	Completely soluble in water
Partition coefficient n-octanol/water (log value)	N/D
Vapor pressure	0.05 mmHg
Evaporation rate	N/D
Density and/or relative density	N/D
Relative vapor density	2.1 (Air=1)

Particle characteristics

N/D

Supplemental information regarding physical hazard classes

Safety Data Sheet

N/D

Further safety characteristics (supplemental)

N/D

SECTION 10: Stability and reactivity

Reactivity

Stable under normal conditions of use.

Chemical stability

Stable under normal conditions of use.

Possibility of hazardous reactions

None known.

Conditions to avoid

None known.

Incompatible materials

Slightly reactive to oxidizing agents, alkalis.

Hazardous decomposition products

Carbon oxides.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

The ATE (oral) of the mixture is: 526.32 mg/kg bw

Ethylene glycol

LD50 Oral - Rat - 4,700 mg/kg

LD50 Skin - Rabbit - 10,626 mg/kg

- other fish - 50 mg/l - 61 d

LC50 - Oncorhynchus mykiss (rainbow trout) - 18,500 mg/l - 96 h

LC50 - Leuciscus idus (golden orfe) - >10,000 mg/l - 48 h

Skin corrosion/irritation

No data available.

Serious eye damage/irritation

No data available.

Respiratory or skin sensitization

This product may cause irritation to contaminated tissues.

Germ cell mutagenicity

No data available.

Carcinogenicity

Safety Data Sheet

No data available.

Reproductive toxicity

This product contains a component that is suspected of causing birth defects and other reproductive harm.

STOT-single exposure

Not classified.

STOT-repeated exposure

The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2. Exposure routes: ingestion. Target organs: kidney, central nervous system, liver.

Aspiration hazard

No data available.

SECTION 12: Ecological information

Toxicity

Ethylene glycol

LD50 Oral - Rat - 4,700 mg/kg

LD50 Skin - Rabbit - 10,626 mg/kg

- other fish - 50 mg/l - 61 d

LC50 - Oncorhynchus mykiss (rainbow trout) - 18,500 mg/l - 96 h

LC50 - Leuciscus idus (golden orfe) - >10,000 mg/l - 48 h

Persistence and degradability

Ratio BOD/ThBOD: 1.78%

Bioaccumulative potential

Bioaccumulation, other fish - 61d, 50 mg/L

Mobility in soil

This product is mobile in soil.

SECTION 13: Disposal considerations

Disposal methods

Product disposal

Dispose of contents/container in accordance with local, regional, national, and international regulations. Do not pierce or burn, even after use.

Sewage disposal

Avoid release into the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

Other disposal recommendations

Container may remain hazardous when empty. Continue to observe all precautions. Do not puncture or incinerate container.

SECTION 14: Transport information

Safety Data Sheet

DOT (US)

UN Number: UN3082

Class: 9

Packing Group: III

Proper Shipping Name: Environmentally hazardous substances, liquid, n.o.s.

IMDG

UN Number: UN3082

Class: 9

Packing Group: III

Proper Shipping Name: Environmentally hazardous substances, liquid, n.o.s.

IATA

UN Number: UN3082

Class: 9

Packing Group: III

Proper Shipping Name: Environmentally hazardous substances, liquid, n.o.s.

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

California Prop. 65 Components

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Chemical name: Ethylene glycol

CAS number: 107-21-1

06/19/2015 - Developmental toxicity

Canadian Domestic Substances List (DSL)

Chemical name: 1,2-Ethanediol

CAS: 107-21-1

Massachusetts Right To Know Components

Ethylene glycol

CAS number: 107-21-1

New Jersey Right To Know Components

Ethylene glycol

CAS number: 107-21-1

Pennsylvania Right To Know Components

Ethylene glycol

CAS number: 107-21-1

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Safety Data Sheet

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

Ethylene glycol

CAS number: 107-21-1

Toxic Substances Control Act (TSCA) Inventory

All chemicals are listed or exempt.

SECTION 16: Other information

N/A = Not applicable; N/D = Not determined

Further information/disclaimer

To the best of our knowledge, information contained herein is accurate. However there is no assumption of liability for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazard which exists. The information contained in this SDS was obtained from current and reliable sources; however, the data is provided without warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions of handling, storage and disposal of this product are beyond the control of the manufacturer, the manufacturer will not be responsible for loss, injury, or expense arising out of the products improper use. No warranty, expressed or inferred, regarding the product described in this SDS shall be created or inferred by any statement in this SDS. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this SDS. The user is responsible for full compliance.

Preparation information

Prepared by: Jessica Wilson

Date prepared: 8/29/2022

