

A. G. Layne, Inc.

SAFETY DATA SHEET

SDS Distribution: The information in this document should be made available to all who may handle the product.

Product ID Ethylene Glycol

SAFETY DATA SHEET

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

Product ID: Ethylene Glycol
Product Name: Ethylene Glycol
Revision Date: Oct 03, 2017 **Date Printed:** Oct 03, 2017
Version: 1.2 **Supersedes Date:** Nov 03, 2015
Manufacturer's Name: A. G. Layne, Inc.
Address: 4578 Brazil Street Los Angeles, CA, US, 90039
Emergency Phone: CHEMTREC US : 1-800-424-9300, INTERNATIONAL CALLS : 1-703-527-3887
Information Phone Number: 323-245-2345
Fax:
Product/Recommended Uses: Laboratory chemicals, manufacture of substances

SECTION 2) HAZARDS IDENTIFICATION

Classification

Acute toxicity Oral - Category 4
Eye Irritation - Category 2A
Skin Irritation - Category 3
Specific Target Organ Toxicity - Single Exposure - Category 1

Pictograms



Signal Word

Danger

Hazardous Statements - Health

Harmful if swallowed
Causes serious eye irritation
Causes mild skin irritation
Causes damage to organs.

Precautionary Statements - General

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.

Precautionary Statements - Prevention

Wash with soap and water thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
Do not breathe dust/fume/gas/mist/vapors/spray.

Precautionary Statements - Response

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

Rinse mouth.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

If skin irritation occurs: Get medical advice/attention.

IF exposed or concerned: Call a POISON CENTER/doctor/...

Specific treatment (see First-aid on this label).

Precautionary Statements - Storage

Store locked up.

Precautionary Statements - Disposal

Dispose of contents/container to disposal recycling center.

Waste management should be in full compliance with federal, state and local laws.

Acute toxicity of less than one percent of the mixture is unknown

SECTION 3) COMPOSITION, INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
0000107-21-1	ETHYLENE GLYCOL	79% - 100%
0000123-91-1	1,4-DIOXANE	0 - 0.001 %
0000075-07-0	ACETALDEHYDE	0 - 0.001 %

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality.

SECTION 4) FIRST-AID MEASURES

Skin Contact

Rinse/wash with lukewarm, gently flowing water (and mild soap) for 15-20 minutes or until product is removed. If skin irritation occurs or you feel unwell: Get medical advice/attention.

Eye Contact

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing. Take care not to rinse contaminated water into the unaffected eye or onto the face. Get immediate medical attention.

Inhalation

Remove source of exposure or move person to fresh air and keep comfortable for breathing. If victim is not breathing, call 911 and administer CPR as directed.

Eliminate all ignition sources if safe to do so.

Ingestion

Do NOT induce vomiting. If vomiting occurs naturally, lie on your side, in the recovery position. Immediately call 911 POISON CENTER/doctor/. Immediately transport to the nearest medical facility for treatment.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Dry chemical, foam, carbon dioxide or fog is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Sand or earth may be used for small fires only.

Unsuitable Extinguishing Media

No data available.

Specific Hazards in Case of Fire

No data available.

Fire-fighting Procedures

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged

containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel.

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Special Protective Actions

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Emergency Procedure

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

RELEASE CAN CAUSE FIRE/EXPLOSION. LIQUIDS/VAPORS MAY IGNITE.

Do not touch or walk through spilled material.

Isolate hazard area and keep unnecessary people away. Remove all possible sources of ignition in the surrounding area. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

If spilled material is cleaned up using a regulated solvent, the resulting waste mixture may be regulated.

Recommended Equipment

Positive pressure, full-facepiece self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved).

Personal Precautions

Avoid breathing vapor. Avoid contact with skin, eye or clothing. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Use explosive proof equipment. Avoid inhalation of dust and contact with skin and eyes. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental Precautions

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning up

Sand, clay and absorbent socks can be used to contain a spill.

SECTION 7) HANDLING AND STORAGE

General

Wash hands after use.

Do not get in eyes, on skin or on clothing.

Do not breathe vapors or mists.

Use good personal hygiene practices.

Eating, drinking and smoking in work areas is prohibited.

Remove contaminated clothing and protective equipment before entering eating areas.

Eyewash stations and showers should be available in areas where this material is used and stored.

Ventilation Requirements

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, direct sunlight, strong oxidizers and any incompatibilities. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty container retain residue and may be dangerous.

Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is used and stored.

Ground and bond containers and receiving equipment. Avoid static electricity by grounding.

Electrostatic charges may be generated during pumping. Keep away from aerosols, flammables, oxidizing agents, corrosives and from other flammable products.

SECTION 8) EXPOSURE CONTROLS, PERSONAL PROTECTION

Respiratory Protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers.

Skin Protection

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.

Appropriate Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Eye Protection

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

Chemical Name	OSHA TWA (ppm)	OSHA TWA (mg/m3)	OSHA STEL (ppm)	OSHA STEL (mg/m3)	OSHA Tables (Z1, Z2, Z3)	OSHA Carcinogen	OSHA Skin designation	NIOSH TWA (ppm)	NIOSH TWA (mg/m3)	NIOSH STEL (ppm)	NIOSH STEL (mg/m3)	NIOSH Carcinogen
ACETALDEHYDE	200	360			1							1
ETHYLENE GLYCOL												

Chemical Name	ACGIH TWA (ppm)	ACGIH TWA (mg/m3)	ACGIH STEL (ppm)	ACGIH STEL (mg/m3)	ACGIH Carcinogen	ACGIH Notations	ACGIH TLV Basis
ACETALDEHYDE			C 25		A2	A2	Eye & URT irr
ETHYLENE GLYCOL				C 100	A4	A4	URT & eye irr

(C) - Ceiling limit, A2 - Suspected Human Carcinogen, A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans, A4 - Not Classifiable as a Human Carcinogen, dam - Damage, irr - Irritation, URT - Upper respiratory tract

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Specific Gravity	1.15
Density	9.60 lb/gal
% VOC	99.00%
Density VOC	9.50 lb/gal
% Solids By Weight	0.00%

Appearance	Clear liquid
Odor Threshold	N/A
Odor Description	N/A
pH	N/A
Water Solubility	N/A
Flammability	N/A
Flash Point Symbol	C
Flash Point	111 °C

Viscosity	N/A
Lower Explosion Level	N/A
Upper Explosion Level	N/A
Vapor Pressure	N/A
Vapor Density	N/A
Freezing Point	N/A
Melting Point	N/A
Low Boiling Point	N/A
High Boiling Point	N/A
Auto Ignition Temp	N/A
Decomposition Pt	N/A
Evaporation Rate	N/A
Coefficient Water/Oil	N/A
VOC Composite Partial Pressure	0.0925256 mmHg

SECTION 10) STABILITY AND REACTIVITY

Stability

Stable under normal conditions of use.

Conditions to Avoid

Avoid heat, sparks, open flames and other ignition sources.

Hazardous Reactions/Polymerization

No data available.

Incompatible Materials

Strong oxidizing agents.

Hazardous Decomposition Products

Thermal decomposition may yield carbon dioxide and/or carbon monoxide.

SECTION 11) TOXICOLOGICAL INFORMATION

Acute toxicity

Ingestion: May be harmful or fatal if swallowed.

Harmful if swallowed

Aspiration hazard

No data available

Carcinogenicity

No data available

Germ cell mutagenicity

No data available

Reproductive toxicity

No data available

Respiratory/Skin Sensitization

Slightly irritating to respiratory system.

No data available

Serious eye damage/irritation

Causes serious eye irritation

Skin Corrosion/Irritation

Causes mild skin irritation

Specific Target Organ Toxicity - Repeated Exposure

No data available

Specific Target Organ Toxicity - Single Exposure

Causes damage to organs.

0000107-21-1 ETHYLENE GLYCOL

LD50 (oral, rat): 5.89 g/kg; 8.54 g/kg; 13.0 g/kg (5)
LD50 (oral, mouse): 7.5 g/kg; 15.28 g/kg (5,6)
LD50 (oral, guinea pig): 6.6 g/kg; 11.0 g/kg (5)
LD50 (oral, rabbit): 5.0 g/kg (5)
LD50 (dermal, rabbit): 9.5 g/kg (6)

0000075-07-0 ACETALDEHYDE

LC50 (rat): 13300 ppm (4-hr exposure) (4)
LC50 (rat): 20000 ppm (30-minute exposure) (2)
LC50 (hamster): 17000 ppm (4-hr exposure) (4)
LC50 (rat): 20000 ppm (30-minute exposure) (2)
LD50 (oral, rat): 1930 mg/kg (19)

0000123-91-1 1,4-DIOXANE

LC50 (mouse): 5150 ppm (4-hour exposure); cited as 37000 mg/m3 (10300 ppm) (2-hour exposure) (16,19, unconfirmed)
LC50 (female rat): 14250 ppm (4-hour exposure); cited as 51.3 mg/L (4-hour exposure) (20)
LD50 (oral, rat): 5340 mg/kg; cited as 5.17 cc/kg (21)
LD50 (oral, rabbit): 2060 mg/kg; cited as 2 cc/kg (21)
LD50 (dermal, rabbit): 7600 mg/kg (cited as 7600 microL/kg) (16, unconfirmed)

SECTION 12) ECOLOGICAL INFORMATION

Bio-accumulative Potential

No data available.

Mobility in Soil

No data available.

Persistence and Degradability

No data available.

Toxicity

No data available

Other adverse effects

No data available.

SECTION 13) DISPOSAL CONSIDERATIONS

Waste Disposal Method

Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state and local laws.

Empty Containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14) TRANSPORT INFORMATION

U.S. DOT Information

UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. (Ethylene Glycol) 9, PG III

Emergency Response Guide (ERG)

Emergency Response Guide 171

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0000107-21-1	ETHYLENE GLYCOL	79% - 100%	SARA313, CERCLA,SARA312,VOC,TSCA,CA_TAC_TOX,NEI - National Emissions Inventory,CA_Prop65 - California Proposition 65,CA_Prop65_Type_Toxicity_Develop - CA_Proposition65_Type_Toxicity_Developmental
0000123-91-1	1,4-DIOXANE	0 - 0.001 %	SARA313, CERCLA,SARA312,VOC,IARCCarcinogen,TSCA,RCRA,CA_TAC_TOX,CA_TAC_Carcinogen,CA_Carcinogen,NEI - National Emissions Inventory,CA_Prop65 - California Proposition 65,CA_Prop65_Type_Toxicity_Cancer - CA_Proposition65_Type_Toxicity_Cancer,OSHA, OSHA Skin designation
0000075-07-0	ACETALDEHYDE	0 - 0.001 %	CERCLA,SARA312,VOC,IARCCarcinogen,TSCA,RCRA,CA_TAC_TOX,CA_TAC_Carcinogen,CA_Carcinogen,NEI - National Emissions Inventory,CA_Prop65 - California Proposition 65,CA_Prop65_Type_Toxicity_Cancer - CA_Proposition65_Type_Toxicity_Cancer,OSHA

SECTION 16) OTHER INFORMATION

General

A.G. Layne, Inc. urges each customer or recipient of this SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. It is the Buyer's/User's responsibility to ensure that his activities comply with all Federal, State, Provincial or Local laws. The information presented here pertains only to the product as shipped. The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. NO warranty or guarantee is expressed or implied regarding the accuracy of this data or the results to be obtained from the use of the product.

HMIS

Health	* <input type="checkbox"/>
FLAMMABILITY	<input type="checkbox"/>
Physical Hazard	<input type="checkbox"/>
Personal Protection	H <input type="checkbox"/>

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks

Version 1.2:

Revision Date: Oct 03, 2017

Update to section 2

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