



MATERIAL SAFETY DATA SHEET

CONTACT : **LEONID CHEMICALS**
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ETHYLENE GLYCOL

SECTION 1- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name:
Ethylene Glycol

Catalog Numbers: E039

Synonyms: 1,2-Dihydroxyethane, 1,2-Ethanediol, Ethylene alcohol, Ethylene dihydrate, Glycol, Glycol ether.

Company Information:

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SECTION 2- COMPOSITION, INFORMATION ON INGREDIENTS

CAS # : 107-21-1
Chemical Name : ETHYLENE GLYCOL
% : >99%
EINECS# : 203-473-3
Hazard Symbols : XN
Risk Phrases : 22

SECTION 3- HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Harmful if swallowed.

Potential Health Effects

Eye:

May cause moderate eye irritation.

Skin:

Low hazard for usual industrial handling. May be absorbed through the skin.

Ingestion:

May cause nausea and vomiting.

Inhalation:

May cause respiratory tract irritation. If heated, dust or fume may cause respiratory tract irritation. Heated or misted substance may cause headache, irregular eye movements, and possible coma.

Chronic:

May cause kidney injury.



SECTION 4- FIRST AID MEASURES

Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed.

Skin:

Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

Ingestion:

If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately. Induce vomiting by giving one teaspoon of Syrup of Ipecac.

Inhalation:

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Notes to Physician:

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.

Extinguishing Media:

In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam. Water or foam may cause frothing.

SECTION 6- ACCIDENTAL RELEASE MEASURES

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition.

SECTION 7 - HANDLING and STORAGE

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Ground and bond containers when transferring material. Do not get on skin or in eyes. Do not ingest or inhale.

Storage:

Keep away from sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:

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 gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Color:	Clear, colorless viscous, sweet-tasting.
Odor:	None reported.
pH:	Not available.
Vapor Pressure:	.05 mm Hg @ 20C
Viscosity:	21 cP @ 20C
Boiling Point:	387 deg F
Freezing/Melting Point:	8.6 deg F
Autoignition Temperature:	748 deg F (397.78 deg C)
Flash Point:	232 deg F (111.11 deg C)
Explosion Limits, lower:	3.2
Explosion Limits, upper:	15.3 (est.)
Decomposition Temperature:	Not available.
Solubility in water:	Soluble in water.
Specific Gravity/Density:	1.11 (water=1)
Molecular Formula:	C2H6O2
Molecular Weight:	62.0408

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid:

Incompatible materials, ignition sources, contact with water, excess heat.

Incompatibilities with Other Materials:

Sodium hydroxide, sulfuric acid, potassium permanganate, sodium peroxide, strong oxidizing agents, strong bases.

Hazardous Decomposition Products:

Carbon monoxide, carbon dioxide.

Polymerization:

Has not been reported.

SECTION 11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 107-21-1: KW2975000

LD50/LC50:

CAS# 107-21-1: Draize test, rabbit, eye: 500 mg/24H Mild; Draize test, rabbit, eye: 100 mg/1H Mild; Draize test, rabbit, eye: 0.012 ppm/3D; Draize test, rabbit, eye: 1440 mg/6H Moderate; Oral, mouse: LD50 = 5500 mg/kg; Oral, rat: LD50 = 4700 mg/kg; Skin, rabbit: LD50 = 9530 uL/kg.

Carcinogenicity:

ETHYLENE GLYCOL -

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Other:

See actual entry in RTECS for complete information.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity:

Goldfish LD50= >5000mg/L/24Hr Guppies LC50= 493,000ppm/7D Shrimp (salt water) LC50= >100ppm/48Hr

SECTION 13 - DISPOSAL CONSIDERATIONS

Products which are considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local waste regulator for advice. Empty containers must be decontaminated before returning for recycling.

SECTION 14 - TRANSPORT INFORMATION

IATA

Shipping Name: TOXIC LIQUID, FLAMMABLE ORGANIC, NOS
Hazard Class: 6.1
UN Number: 2929
Packing Group: II

IMO

Shipping Name: TOXIC LIQUID, FLAMMABLE ORGANIC, NOS
Hazard Class: 6.1
UN Number: 2929
Packing Group: II

RID/ADR

Shipping Name: TOXIC LIQUID, FLAMMABLE ORGANIC, NOS
Hazard Class: 6.1
UN Number: 2929
Packing Group: II

USA RQ: CAS# 107-21-1: 5000 lb final RQ; 2270 kg final RQ

SECTION 15 - REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN

Risk Phrases:

R 22 Harmful if swallowed.

Safety Phrases:

S 2 Keep out of reach of children.

WGK (Water Danger/Protection)

CAS# 107-21-1: 0

United Kingdom Occupational Exposure Limits

CAS# 107-21-1: OES-United Kingdom, TWA 10 mg/m³ TWA (particulate); 52 mg/m³ TWA (vapour)

CAS# 107-21-1: OES-United Kingdom, STEL 104 mg/m³ STEL (vapour)

United Kingdom Maximum Exposure Limits

Canada

CAS# 107-21-1 is listed on Canada's DSL List.

CAS# 107-21-1 is listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 107-21-1: OEL-AUSTRALIA: TWA 60 mg/m³; STEL 120 mg/m³

OEL-BELGIUM: STEL 50 ppm (127 mg/m³)

OEL-DENMARK: STEL 50 ppm (130 mg/m³)

OEL-DENMARK: TWA 10 mg/m³

OEL-FINLAND: TWA 10 mg/m³; STEL 20 mg/m³

OEL-FINLAND: TWA 50 ppm (125 mg/m³); STEL 75 ppm (190 mg/m³)

OEL-FRANCE: STEL 50 ppm (125 mg/m³)

OEL-HUNGARY: STEL 50 mg/m³; Skin

OEL-THE NETHERLANDS: TWA 10 mg/m³

OEL-THE NETHERLANDS: TWA 50 ppm (125 mg/m³)

OEL-RUSSIA:STEL 5 mg/m³
OEL-SWEDEN:TWA 50 ppm (130 mg/m³);STEL 75 ppm (19 mg/m³)
OEL-SWITZERLAND:TWA 1 mg/m³
OEL-SWITZERLAND:TWA 50 ppm (125 mg/m³)
OEL-UNITED KINGDOM:TWA 10 mg/m³
OEL-UNITED KINGDOM:TWA 60 mg/m³;STEL 125 mg/m³
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

US FEDERAL

TSCA

CAS# 107-21-1 is listed on the TSCA inventory.

SECTION 16 - ADDITIONAL INFORMATION

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.