



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name: GLYCERIN
Supplier: HiLIQ Co., Limited
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Version # 04
Revision date 02-10-2017
CAS # 56-81-5
MSDS Number GLYC301
Product Code 99318844
Product use Emulsifier, emollient, plasticizer, humectant, sweetener, anti-freeze, in surface coatings and paints, cosmetics, drug and food products. Intermediate for making glycerol derivatives.
Synonym(s) Glycerol

2. Hazards Identification

Emergency overview Harmful in contact with eyes. Prolonged exposure may cause chronic effects.
OSHA regulatory status This product is considered not hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects
Routes of exposure Inhalation. Ingestion. Skin contact. Eye contact.
Eyes Contact with eyes may cause irritation.
Skin Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. Avoid contact with the skin. When it is heated, this material may cause thermal burns.
Inhalation Avoid breathing dust/fume/gas/mist/vapors/spray. High mist concentrations may cause irritation of respiratory tract.
Ingestion Components of the product may be absorbed into the body by ingestion. Do not ingest. Unlikely to be harmful unless excessive amount.
Specific hazards No hazards resulting from the material as supplied.
Potential environmental effects May cause long-term adverse effects in the environment. Product is biodegradable.

3. Composition / Information on Ingredients

Components	CAS #	Percent
1,2,3-PROPANETRIOL	56-81-5	99-100

4. First Aid Measures

First aid procedures
Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Skin contact Wash off with warm water and soap. Get medical attention if irritation develops and persists.
Inhalation If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention, if needed.

Ingestion

Rinse mouth thoroughly. If ingestion of a large amount does occur, call a poison control center immediately.

Notes to physician

Symptoms may be delayed.

General advice

If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures**Flammable properties**

This product may react explosively when mixed with oxidizing agents.

Extinguishing media**Suitable extinguishing media**

Water. Water spray. Foam. Dry powder. Carbon dioxide (CO2).

Special protective equipment for fire-fighters

Wear suitable protective equipment.

Specific methods

In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers.

6. Accidental Release Measures**Personal precautions**

Keep unnecessary personnel away. Keep upwind. Keep out of low areas. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not contaminate water.

Methods for containment

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use water spray to reduce vapors or divert vapor cloud drift. Prevent entry into waterways, sewer, basements or confined areas.

Methods for cleaning up

Should not be released into the environment.

Large Spills: Dike far ahead of spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Following product recovery, flush area with water.

Never return spills in original containers for re-use.

7. Handling and Storage**Handling**

Use only with adequate ventilation. Wash thoroughly after handling. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not get this material in contact with eyes. Avoid contact with skin. Avoid prolonged exposure. Avoid release to the environment.

Storage

Keep away from heat, sparks and open flame. Store in a well-ventilated place. Keep container tightly closed. Keep away from food, drink and animal feedingstuffs. Keep out of the reach of children. Use care in handling/storage.

8. Exposure Controls / Personal Protection**Occupational exposure limits****ACGIH****Material****Type****Value****Form**

GLYCERIN (56-81-5)

TWA

10.0000 mg/m3

Mist.

U.S. - OSHA**Material****Type****Value****Form**

GLYCERIN (56-81-5)

PEL

5.0000 mg/m3

Respirable fraction.

15.0000 mg/m3

Total dust.

TWA

5.0000 mg/m3

Respirable fraction.

10.0000 mg/m3

Total dust.

Engineering controls

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Personal protective equipment

Eye / face protection	Do not get in eyes. Chemical goggles are recommended.
Skin protection	Wear appropriate chemical resistant clothing. Chemical resistant gloves.
Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
General hygiene considerations	Do not get in eyes. Avoid contact with skin. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance	Clear.
Color	Water white.
Odor	Bland
Odor threshold	Not available.
Physical state	Liquid.
Form	Liquid.
pH	Not available.
Melting point	68 °F (20 °C)
Freezing point	Not available.
Boiling point	> 554 °F (> 290 °C) 101.3232 kPa
Flash point	> 390.2 °F (> 199 °C) Pensky-Martens Closed Cup
Evaporation rate	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	0.0025 mm Hg at 122 F (50 C)
Vapor density	Not available.
Specific gravity	Not available.
Relative density	126 at 68 F (20 C)
Solubility (water)	100 %
Partition coefficient (n-octanol/water)	-1.76
Auto-ignition temperature	739 °F (392.8 °C)
Decomposition temperature	Not available.
VOC	Not available.
Viscosity	1410 mPa·s at 20° C

10. Chemical Stability & Reactivity Information

Chemical stability	Material-is-stable-under-normal-conditions.
Conditions to avoid	Heat,-flames-and-sparks.-Avoid-contact-with-oxidizing-agents-(e.g.-nitric-acid,-peroxides-and chromates).
Materials to avoid	Avoid-contact-with-oxidizing-agents-(e.g.-nitric-acid,-peroxides-and-chromates).
Hazardous decomposition products	Irritants. Toxic gas.
Hazardous polymerization	Hazardous-polymerization-does-not-occur.

11. Toxicological Information

Toxicological data

Product	Test Results
1,2,3-PROPANETRIOL (56-81-5)	Acute Oral LD50 Rat: >= 2 g/kg
Sensitization	Not available.
Local effects	Components of the product may be absorbed into the body through the skin. Contact may irritate or burn eyes.

Chronic effects	Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood. Prolonged exposure may cause chronic effects.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Skin corrosion/irritation	Not available.
Mutagenicity	Not available.
Neurological effects	Not available.
Reproductive effects	Not available.
Teratogenicity	Not available.
Further information	Symptoms may be delayed.

12. Ecological Information

Ecotoxicological data

Product	Test Results
1,2,3-PROPANETRIOL (56-81-5)	LC50 Rainbow trout,donaldson trout (Oncorhynchus mykiss): 51000 - 57000 mg/l 96.00 Hours

* Estimates for product may be based on additional component data not shown.

Ecotoxicity	Components of this product have been identified as having potential environmental concerns.
Environmental effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Persistence / degradability	Even though this product is readily biodegradable, it must not be indiscriminately discarded into the environment.

13. Disposal Considerations

Disposal instructions	Do not allow this material to drain into sewers/water supplies. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). 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. Dispose in accordance with all applicable regulations.
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14. Transport Information

DOT

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.
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CERCLA/SARA Hazardous Substances - Not applicable.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
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Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Contains no California Prop 65 chemicals.

US - New Jersey Community RTK (EHS Survey): Reportable threshold

US - Pennsylvania RTK - Hazardous Substances: Listed substance

1,2,3-PROPANETRIOL (CAS 56-81-5) Listed.

16. Other Information

HMIS® ratings Health:-1*
Flammability:-1
Physical-hazard:-0

NFPA ratings Health:-1
Flammability:-1
Instability:-0

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