

Refined Glycerine 99.7 USP Grade Safety Data Sheet



SECTION 1: Identification of the substance or mixture and the company or undertaking

1.1 Product identifier

Product type : Mixture
Trade name : Refined Glycerine 99.7 USP Grade
Other name : Glycerol, 1,2,3-Propanetriol, 1,2,3-Trihydroxypropane, Glycyl alcohol
CAS number : 56-81-5
EC number : 200-289-5

1.2 Recommended and restricted uses of the substance or mixture

Recommended uses : Industrial, lubricants, personal care, food additives, surfactants.
Restricted uses : None known.

1.3 Company identification

Company name : U & P PTE LTD
Company address : 2 Banyan Place, Jurong Island,
Singapore 627700
Company telephone : 65 - 6789 9898

1.4 Emergency telephone number

Company emergency telephone : 65 – 6464 9898
Singapore emergency phone number : National Environment Agency; 1800-CALL NEA (1800-2255-632)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (29CFR1910.1200 Appendix A) : None
GHS physical hazard : None.
GHS health hazard : None.
GHS environmental hazard : None.

2.2 Label warnings of the substance or mixture

Signal word : None
Hazard statements : None
Precautionary statements : None
Hazard symbol (pictogram) : None

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2.3 Hazards not otherwise classified

Other hazards : No additional information available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : 1,2,3-Propanetriol
Glycerin
Formula : C₃H₈O₃
Molecular weight : 92.09 g/mol
CAS-No. : 56-81-5
EC-No. : 200-289-5

3.2 Mixtures

Chemical name	Common name	Typical %	CAS number	Health hazard
Glycerine	Glycerol	99.7	56-81-5	Target organ (NIOSH)
Water	Water	0.3	7732-18-5	None

SECTION 4: First-aid measures

4.1 Description of first-aid measures

Exposure route	First-aid measure
Inhalation	: Remove the victim into fresh air. Observe victim's breathing. If breathing is labored seek immediate medical attention.
Skin contact	: Wash immediately with soap and water. If irritation develops, seek medical attention. Launder contaminated clothing.
Eye contact	: Rinse immediately with plenty of water for 15 minutes. Remove contact lenses if present and easy to do. If irritation occurs, seek immediate medical (ophthalmologist) attention.
Ingestion	: Rinse mouth with plenty of water. For ingestion of large quantities seek immediate medical attention. Do not induce vomiting. Contact poison control center.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms after inhalation : May experience dizziness and headache.
: Irritation of the nose and throat.

Symptoms after skin contact : Mild irritation of the skin may occur.

Symptoms after eye contact : Mild irritation of the eye tissue may occur.
: May cause corneal inflammation.

Symptoms after ingestion : May cause nausea and vomiting.

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4.3 Indication of any immediate medical attention and special treatment needed

Treatment after inhalation : If breathing is labored seek immediate medical attention.
Treatment after skin contact : If skin irritation occurs seek immediate medical attention.
Treatment after eye contact : If eye irritation occurs seek immediate ophthalmologist attention.
Treatment after ingestion : If ingestion of a large quantity seek immediate poison control center.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable media : Carbon dioxide and alcohol resistant foam.
Unsuitable media : Water or foam may cause frothing.

5.2 Specific hazards arising from the substance or mixture

Direct fire hazard : Not flammable.
Indirect fire hazard : Exposure to temperature above the flash point (177°C).
Explosive hazard : Exposure to temperature above the flash point (177°C).
Reactivity : Reactivity with strong oxidizers. Also refer to subsection 7.2.
Combustion products : Carbon dioxide, carbon monoxide and acrolein.

5.3 Special protective equipment and precautions for fire-fighters

Protective equipment : Full protective clothing.
: Self contained breathing apparatus.
Precautions : Per NIOSH glycerin mist is hazardous (target organs: eyes, skin, respiratory system, kidneys).
: OSHA TWA 15 mg/m³ respirable fraction as total dust (mist).
: Inhalation may cause severe injury. Effects of inhalation may be delayed.
: Glycerin may decompose upon heating to produce toxic fumes.
: Isolate spill or leak area in all directions for at least 50 meters.
: If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters in all directions.
Emergency response guide : ERG 154.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : If mixture is a mist, stay upwind.
Protective equipment : Wear rubber gloves, rubber boots, face shield and chemical hazard suit. If material is a mist wear self-contained breathing apparatus.
Emergency procedures : Mark the spill area with hazard tape or cones. Contain the spill area with suitable absorbent. Keep away from streams, rivers and lakes. If

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mixture is a mist, alert immediate neighborhood to close windows and doors. Contain and dissipate mist via spraying with water or alcohol resistant foam.

6.2 Environmental precautions

Precautions : Keep out of streams, rivers and lakes. Mixture is regulated as oil under the Clean Water Act. Abide by all laws per this regulation.

6.3 Methods and materials for containment and cleanup

Methods : Use chemical absorbent pigs or manually spread chemical absorbent onto spill area. After the mixture is absorbed, dispose in approved waste facility.

Materials : Approved materials include sand, clay, chemical absorbent and carbon.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handling temperature : About 20 - 30°C above the melt point (18°C).
Handling equipment : Rubber hoses, aluminum or stainless steel (grade 304) lines. Stainless steel (grade 304) for pumps.

7.2 Conditions for safe storage, including any incompatibilities

Storage area : Store in dry area. Store at room temperature. Store in dyke area to contain any spills. Protect from heat.
Packaging materials : Polyethylene, aluminum, stainless steel (grade 304), rubber lined or epoxy lined tanks or drums. Graphite or rubber gaskets.
Incompatibilities : Oxidizers. Glycerin also is incompatible with hydrogen peroxide, potassium permanganate, nitric acid + sulfuric acid, perchloric acid + lead oxide, acetic anhydride, aniline + nitrobenzene, Ca(OCl)₂, CrO₃, F₂ + PbO, KMnO₄, K₂O₂, AgClO₄ and NaH. A mixture with chlorine explodes if heated to 158-176°F. It reacts with acetic acid, potassium peroxide, sodium peroxide, hydrochloric acid, (HClO₄ + PbO) and Na₂O₂. Contact with potassium chlorate may be explosive. It also reacts with ethylene oxide, perchloric acid, nitric acid + hydrofluoric acid and phosphorus triiodide.

SECTION 8: Exposure controls/personal protection

8.1 Exposure controls

OSHA PEL : TWA 5 mg/m³.
: TWA 15 mg/m³ respirable fraction.
ACGIH TLV : TWA 10 mg/m³.
NIOSH REL : TWA 10 mg/m³ (default value).

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8.2 Appropriate engineering controls

Engineering controls : If mist exists, install ventilation equipped with carbon canisters. Ventilation should be 10 air exchanges per hour. Local exhaust ventilation is recommended.

8.3 Personal protection equipment

Personal protective equipment : Rubber gloves and safety glasses. Self contained breathing apparatus if mist exists.

Personal protective equipment pictograms :



SECTION 9: Physical and chemical properties

9.1 Physical and chemical properties

Appearance : Colorless liquid.
Odor : Odorless.
Odor threshold : Substance is odorless.
pH: 1 % Solution : Not pertinent
Boiling point : 290°C.
Flash point : 160°C.
Evaporation rate : No data available.
Flammability : Not flammable.
Flammability limit : No data available.
Vapor pressure : <1mm Hg at 20°C.
Evaporation rate : Negligible
Solubility : Complete in water.
Auto-ignition temperature : 393°C.
Specific Gravity : 1.26

9.2 Other information

Other information : No additional information available.

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SECTION 10: Stability and reactivity

Reactivity	: May react violently with oxidizers.
Chemical stability	: Stable under storage conditions.
Possibility of hazardous reactions	: Hazardous polymerization does not occur.
Conditions to avoid	: Pressure, shock, static discharge or vibration does NOT result in a hazardous condition.
Incompatible materials	: Oxidizers. Also refer to subsection 7.2 for a complete list of incompatible materials.
Hazardous decomposition products	: Carbon dioxide, carbon monoxide and acrolein.

SECTION 11: Toxicological information

11.1 Information on the likely routes of exposure

Inhalation exposure	: From mist.
Skin exposure	: From mist or splashing.
Ingestion exposure	: Not a likely route of exposure.
Eye contact	: From mist or splashing.

11.2 Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	: Labored breathing, shortness of breath and coughing may occur.
Skin contact	: Mild skin irritation may occur.
Ingestion	: Irritation of the mouth, tongue or throat may occur.
Eye contact	: Eye irritation may occur.

11.3 Delayed and immediate effects and also chronic effects from short and long term exposure

Inhalation	: Chronic effects are not known.
Skin contact	: Chronic effects are not known.
Ingestion	: Chronic effects are not known.
Eye contact	: Chronic effects are not known.

11.4 Numerical measures of toxicity

Oral LD50	: Rat 12600 mg/kg. : Rat 5570 mg/kg. : Rabbit 27000 mg/kg. : Mouse 4100 mg/kg.
Skin LD50	: Rabbit > 18700 mg/kg 8 hour exposure.
Ingestion LD50	: Humans 14 subjects ingested 24000 mg/kg per day for 50 days with no observable effects.

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Inhalation LD50 : Rat > 570 mg/m3/hour.
Skin primary irritation : Rabbit 0.5 ml undiluted for 24 hours produced no irritation.
Eye primary irritation : Rabbit 0.1 ml undiluted for 7 days produced no irritation.

11.5 Carcinogenicity

National Toxicology Program : Not listed.
International Agency for
Research on Cancer : Not listed.
OSHA : Not listed.
NIOSH : Not listed.

11.6 Other toxicological information

Reproductive toxicity : Not classified.
Germ cell mutagenicity : Not classified.
Respiratory or skin sensitization : Not classified.
Specific target organ toxicity,
single exposure : Respiratory system, kidneys, eyes and skin (per NIOSH).
Specific target organ toxicity,
repeated exposure : Respiratory system, kidneys, eyes and skin (per NIOSH).
Aspiration hazard : No data available.

SECTION 12: Ecological information

12.1.1 Ecotoxicity aquatic

Fish LC50 : > 5000 mg/l 24 hour goldfish.
Daphnia EC50 : > 10000 mg/l 24 hour.
Rotifer EC50 : No data available.
Algae EC50 : NOEC 2900 mg/l.

12.1.2 Ecotoxicity terrestrial

Ecotoxicity terrestrial : No data available.

12.2 Persistence and degradability

Water : 82% 5 day BOD (activated sludge).
: Readily degradable.
Soil : Koc = 1.
: Mobile.
Air : 7 hour half life.

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12.3 Bio-accumulative potential

Log Kow : -1.76.
: This substance does not have a potential to bio-concentrate.

12.4 Mobility in soil

Surface tension : Air 63 dyne/cm.
Soil mobility : Koc = 1.
: Mobile.

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment : No data available.

12.6 Other adverse effects

Air : Not dangerous to the ozone layer.
Water : Mild pollutant to water.

SECTION 13: Disposal considerations

13.1 Description of waste residues

Storage tank residues : Liquid residue from tank cleaning.
Empty package residues : Liquid residue remaining in emptied package container.
Transport trailer residues : Liquid residue from transport trailer cleaning.
Absorbent material : Solid absorbent containing mixture from a spill.

13.2 Safe handling of waste residues

Storage tank residues : Refer to section 7 for safe handling.
Empty package residues : Refer to section 7 for safe handling.
Transport trailer residues : Refer to section 7 for safe handling.
Absorbent material : Refer to section 7 for safe handling.

13.3 Methods of disposal

Storage tank residues : Dispose via an approved incineration facility.
: Dispose via an approved land fill facility.
: Dispose only in accordance with local, state and federal regulations.
Empty package residues : Remove package to an approved package cleaning and recycling
facility.
: Dispose only in accordance with local, state and federal regulations.
Transport trailer residues : Clean transport trailer at an approved cleaning facility.
: Disposal of cleaning residues must be in accordance with local, state
and federal regulations.
Absorbent material : Dispose via an approved incineration facility.
: Dispose via an approved land fill facility.
: Dispose only in accordance with local, state and federal regulations.

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13.4 Hazardous waste classification (RCRA)

Classification	Regulation	Listed	Hazardous waste number
Ignitability	40CFR261.21	No	
Corrosivity	40CFR261.22	No	
Reactivity	40CFR261.23	No	
Toxicity	40CFR261.24	No	

SECTION 14: Transport information

14.1 UN number

UN number : None.

14.2 UN proper shipping name

Proper shipping name : None.

14.3 Transport hazard class

Hazard class : None.

Hazard label : None.

Hazard pictogram : None.

14.4 Packing group

Packing group : None.

14.5 Environmental hazards

Marine pollutant : Not listed.

14.6 Transport in bulk

US DOT : Not regulated.

IMDG : Not regulated.

IATA : Not regulated.

MARPOL 73/78 : Not regulated.

IBC code : Not regulated.

14.7 Special precautions for user

Special precautions : No additional information available.

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SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the substance or mixture

Product is not a Scheduled Poison

15.2 Chemical inventories

TSCA USA	: Listed.
AICS Australia	: Listed.
DSL Canada	: Listed.
EC Europe	: Listed.
ECL Korea	: Listed.
IECSC China	: Listed.
ENCS Japan	: Listed.
NzIoC New Zealand	: Listed.
PICCS Philippines	: Listed.
SWISS Switzerland	: Listed.

15.3 Chemical safety assessment

Safety assessment : No additional information available.

SECTION 16: Other information

16.1 Hazard ratings

ABBREVIATIONS:

LD50	: Lethal dose for 50% of test population, by inhalation
LDLo	: Lowest documented lethal dose
LD50	: Lethal dose for 50% of test population, by ingestion or skin contact
TDLo	: Lowest published toxic dose

16.2 Safety Data Sheet information

Revision date (MM/DD/YY) : 18/02/2020
Supersede date (MM/DD/YY) :

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16.3 Notice to reader

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