

HESEGO INDUSTRY SDN. BHD.



MATERIAL SAFETY DATA SHEET REFINED GLYCERINE

1. Product and Company Identification

Product Name	Refined Glycerine
Commercial Description	Refined Glycerine 99.7% Min
Material / Origin	Crude Glycerine
Manufacturer Name Address	Hesego Industry Sdn. Bhd. No.15 (Lot 149) Jalan Anggerik Mokara 31/56 Seksyen 31 Kota Kemuning 40460 Bandar Shah Alam Selangor Darul Ehsan MALAYSIA
Telephone Number	+603 5121 0198
Facsimile Number	+603 5122 3198
Emergency	CHEMTREC (800) 424-9300

2. Composition / Information on Ingredients

Chemical Name	1,2,3 – propanetriol Glycerol $C_3H_8O_3$
CAS No.	56-81-5
EC-No.	2002895
EC Symbols	Not Applicable
EC R-phrases	None

3. Hazards Identification

European Hazard classification	This product is not classified as dangerous according to Directive 67/548/EEC
Potential Health Effect	<i>Eye</i> – Concentrated solutions may cause mild transient irritation <i>Skin</i> – Unlikely to be irritant. Heated product may cause thermal burns if contacted <i>Inhalation</i> – Not applicable at ambient temperature. Glycerine mist may be irritative to respiratory tract <i>Ingestion</i> – Unlikely to be harmful unless excessive amount

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Physical / Chemical Hazards

Contact of glycerine with strong oxidizing agent such as Nitric Acid or other strong acids, Chromium Trioxide, Potassium Chlorate, or Potassium Permanganate may cause an explosion

Environmental Hazards

Product is biodegradable

4. First-Aid Measures

General

In all cases of doubt, or when symptoms persist, seek medical attention

Inhalation

Use self-contained breathing equipment if in confined place. Remove to fresh air. If suffocation is serious, take to a doctor

Skin Contact

Use gloves. Remove contaminated clothing. Wash skin thoroughly with plenty of water. Take to a doctor if necessary

Eye Contact

Wash out with plenty of water. Get medical attention if any sensations persist

Ingestion

Remove material from mouth. Drink plenty of water. No typical symptoms and effects known. However, if large amount swallowed or symptoms develop, get medical attention

5. Fire Fighting Measures

Flash Point (Method Used)

198.9°C (PMCC)

Auto-Ignition temperature

Approx 400°C

LEL

N.A.

UEL

N.A.

Extinguishing Media

Use water spray, alcohol resistant foam, CO₂ or dry chemical

Special Fire Fighting Procedure

Use water spray to cool drums exposed to fire

Special Fire Fighting Equipment

Firefighters should use self-contained breathing apparatus and full protective clothing

Other Fire Fighting Consideration

Contact of glycerine with strong oxidizing agent such as Nitric Acid or other strong acids, Chromium Trioxide, Potassium Chlorate, or Potassium Permanganate may cause explosion

Hazardous decomposition/ combustion products

At elevated temperatures there is a risk of exothermic polymerization (>200°C). At temperature >280°C, acrolein may be formed

6. Accidental Release Measures

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Personal Precautions

The usual precautions for handling chemicals should be observed

Environmental Precautions

Minimize contamination of drains, surface and ground waters

Procedure for Spill / Leak Clean-up

Transfer product to suitably labeled containers for disposal at an approved site. Residues and small spillages may be washed away with water and detergent

7. Handling and Storage

Handling

No special precautions required but avoid eye and skin contact as part of normal industrial hygiene. Prevent formation of mist. Eye and skin contact should be avoided if handling at elevated temperatures

Storage

Store in clean tight containers to prevent moisture pick up from air. Can be stored in clean aluminum, stainless steel, fiberglass, or suitable resin-lined steel vessels. In bulk, store at ambient temperature. For pumping, heat up to not more than 45°C

Other Recommendations

Avoid contact with strong oxidizing agent such as Nitric Acid or other strong acids, Chromium Trioxide, Potassium Chlorate, or Potassium Permanganate

8. Exposure Control / Personal Protection

General Precaution

Good industrial hygiene should be followed. Avoid breathing mist

Exposure Limit Values - glycerine

Refer to respective countries' established limits (if any)

Engineering Controls

Ventilation:

Local exhaust - preferred

Mechanical (general) - acceptable

Provide ventilation to meet exposure limits

Personal Protective Equipment

Eye - Not required, although eye protection is recommended as part of good industrial hygiene

Skin - Protective gloves : None required with normal use

Inhalation - An appropriate NIOSH/MSHA approved respirator should be used if a mist or vapor is generated. A NIOSH/MSHA approved self-contained breathing apparatus or air-supplied respirator is recommended if the concentration exceeds the capacity of cartridge respirator. **WARNING:** Air purifying respirator does not protect workers in oxygen-deficient atmospheres

9. Physical and Chemical Properties

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Boiling Point @ 760 mmHg (101.3 kPa)	290°C
Specific Gravity (H ₂ O = 1)	Approx. 1.26
Vapor Pressure	0.0025 mmHg @ 50°C
Vapor Density, Air = 1	Not Available
Appearance and Odor	Water white clear liquid and odorless
Volatiles, % by Volume	Not volatile
Solubility In H ₂ O	Soluble
pH	Neutral
Flash Point, method	198.9°C (PMCC)
Melting Point	Approx. 18°C (solidifies at a much lower temperature)
Viscosity	1410mPa.s at 20°C
Auto ignition temperature	Approx 400°C
Flammability (solid, gas)	Not Determined
Explosive properties	Not to be expected
Oxidizing properties	Not to be expected

10. Stability and Reactivity

Stability	Stable under normal operational procedures
Conditions to avoid	Temp >200°C (Polymerization, Decompose) Keep away from sources of ignition and naked flames
Dangerous decomposition products	Acrolein (>280°C)
Decomposition advices	No decomposition if used according to specification
Reactivity (materials to avoid)	Contact of glycerine with strong oxidizing agent such as Nitric Acid or other strong acids, Chromium Trioxide, Potassium Chlorate, or Potassium Permanganate may cause explosion
Hazardous polymerization	Will not occur

11. Toxicological Information

Acute Toxicity Oral LD ₅₀	>2000 mg/kg (rat)
Irritation	Skin - Mildly irritating Eye - Mildly irritating

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Chronic Toxicity

No additional adverse health effects noted

12. Ecological Information

Ecotoxicity

- Fish
- Algae
- Bacteria

96h-LC₅₀: >5000 mg/l
48h-EC₅₀: >2900 mg/l
72h-IC₅₀: >10,000 mg/l

Mobility

Low potential for sorption to soil. Glycerine will partition primarily to water.

Persistence and degradability

Readily biodegradable (OECD 301)

Bioavailability

Low bioaccumulation potential and is not expected to bioaccumulate

13. Disposal Considerations

Disposal is to be performed in compliance with all federal, state/provincial, and local regulations. Do not dispose of via sinks, drains, or into immediate environment

14. Transportation Requirements

US DOT

Not regulated for transport

Not a hazardous material according to RID/ADR, IMDG, ICAO-TI/IATA-DGR

15. Regulatory Information

Inventory Status

TSCA, EINECS, DSL, JAPAN, AUSTRALIA, PHIL, CHINA, KOREA, NEW ZEALAND, SWITZERLAND

WGK water endangering class

1, low hazard to water

EU Classification

This product is not classified as dangerous according to Directive 67/548/EEC

16. Other information

This MSDS only concerns the above mentioned product and does not need to be valid if used with other products or in any process. This MSDS is intended to provide a brief summary of our knowledge and guidance regarding the use of this product. The information contained here is offered in good faith but without warranty, and has been compiled from sources considered by Hesego Industry to be dependable and is accurate to the best of the Company's knowledge. It remains the user's own responsibility to make sure the information is appropriate and complete for their special use of this product. Hesego Industry assumes no responsibility for injury to the recipient or third persons or for any damage to any property resulting from misuse of this product.