



MATERIAL SAFETY DATA SHEET

REFINED GLYCERINE

SECTION 1 - CHEMICAL PRODUCT IDENTIFICATION

Product Name	Refined Glycerine
Synonyms	Glycerol; 1,2,3-Propanetriol; Glyceritol; Glycic Alcohol; 1,2,3-Trihydroxypropane; 1,2,3-Propanetriol
CAS No	56-81-5
Chemical Formula	C3H5(OH)3
Product Use	Pharmaceutical, food, cosmetics and industrial applications

SECTION 2 - HAZARDS IDENTIFICATION

Emergency Overview	This is expected to be non-hazardous for its intended purpose with normal industrial hygiene.
Potential Health Effects	
Inhalation	Irritation not expected.
Ingestion	Unlikely to be harmful unless excessive amount.
Skin Contact	Irritation not expected.
Eye Contact	Irritation not expected.

If product is heated, vaporization can occur. Eye and upper respiratory irritation may occur.

**SECTION 3 - COMPOSITION, INFORMATION ON INGREDIENTS**

CAS#	Chemical Name	Percent	EINECS/ELINCS
56-81-5	Refined Glycerine	99.5 min	200-289-5

SECTION 4 - FIRST AID MEASURES

After inhalation	Remove to fresh air.
After ingestion	Rinse out mouth, drink plenty of water. If symptoms develop, get medical attention.
After skin contact	Wash thoroughly with water and soap. Remove contaminated clothes.
After eye contact	Immediately flush with plenty of water. If symptoms develop, get medical attention.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point	>390°F (198.9°C)
Auto ignition Temperature	752 °F (400°C)
Fire Extinguishing Media	Use water, drychemical, carbon dioxide, or appropriate foam.
Hazardous Combustion Products	Carbon Oxides
Special hazards caused by the material, its products of combustion or resulting gases	Contact with strong oxidizing agents such as nitric acid or other strong acids, Chromium Trioxide, Potassium Chlorate, or Potassium Permanganate may cause an explosion.
Special protective equipment for fire fighters	Wear protective breathing equipment and full protective clothing.



SECTION 6 - ACCIDENTAL RELEASE MEASURES

General Information	Danger of slipping on escaped product. Use proper personal protective equipment as indicated in Section 8
Personal Precautions	Wear personal protective clothing and appropriate NIOSH approved respirator if mist or vapor is generated.
Environmental Precautions	Do not allow to enter drainage system, surface or ground water.
Measures for cleaning/collection	Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitably labeled containers for disposal at approved site.

Refer to Section 8 for additional personal protection information.
Refer to section 13 for disposal considerations.

Section 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	Keep in a tightly closed container and store upright to prevent any run-out of product. Store in a cool, dry, well ventilated area, away from incompatible substances.

Refer to section 6 for clean-up of spillages.
Refer to Section 13 for disposal considerations.



SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls	No special measures required.
Ventilation	Local exhaust preferred. Mechanical (general) acceptable.
Personal Protective Equipment	
Respiratory Protection	If the exposure limit is exceeded and engineering controls are not feasible, a half face piece particulate respirator (NIOSH type P95 or R95 filters) may be worn for up to ten times the exposure limit, or respirator supplier, whichever is lowest. Please note that N filters are not recommended for this material.
Hand Protection	Suitable protective gloves.
Body Protection	Chemical boots and full protective clothing may be required.
Eye Protection	Protective goggles or face shield with goggles.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Viscous liquid
Odor	Odorless; sweet taste
Vapor Pressure	0.0025 mbar @ 50°C
Evaporation Rate	Not available
Viscosity	1300 mPa.s at 20°C
Boiling Point	Approx. 290°C
Melting Point	Approx. 18°C
Flash Point	199°C (390°F)
Freezing Point	No data available
Appearance	Clear, colorless



pH	Neutral to litmus
Vapor Density	3.17 (Air=1)
Specific Gravity	1.2604 at 25°C
Molecular Weight	92.09 g/mol

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability	Stable under ordinary conditions of use and storage.
Conditions to Avoid	No decomposition if used according to specification.
Materials to Avoid	Contact with strong oxidizing agent such as Nitric Acid or other strong acids, Chromium Trioxide, Potassium Chlorate, or Potassium Permanganate.
Hazardous Decomposition Products	Does not decompose up to 204 C (400 F) Thermal decomposition may release acrolein.

SECTION 11 - TOXICOLOGICAL INFORMATION

Routes of entry	Absorbed through skin. Eye contact.
Toxicity to Animals	Warning: the LC50 values hereunder are estimated on basis of a 4-hour exposure. Acute oral toxicity (LD50): 4090 mg/kg (mouse). Acute dermal toxicity (LD50): 10000 mg/kg (rabbit). Acute toxicity of the mist (LC50): >570 mg/m ³ 1 hour (rat).
Special Remarks on Toxicity to Animals	TDL (rat)-Route: Oral; Dose: 100 mg/kg 1 day prior to mating. TDL (human)-Route: Oral; Dose: 1428 mg/kg.
Special Remarks on Chronic Effects on Humans	Glycerin is transferred across the placenta in small amounts. May cause adverse reproductive effects based on animal data (paternal effects (Rat): spermatogenesis (including genetic material, sperm morphology, motility, and count), testes, epididymis, sperm duct). May affect genetic materials.



The following data are estimated on the basis of the raw materials contained in the product and/or of structurally comparable substances.

SECTION 12 - ECOLOGICAL INFORMATION

Persistence and degradability	Readily and rapidly degradable
Mobility and bioaccumulation potential	Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.
Aquatic Toxicity	Acute fish toxicity LC ₅₀ > 10 to 100 mg product/l

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal is to be performed in compliance with all Federal, State/Provincial and local regulations. Do not dispose into sinks, drains or in to the immediate environment.

SECTION 14 - TRANSPORT INFORMATION

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

SECTION 15 - REGULATORY INFORMATION

Observe normal safety regulations when handling chemicals. Not subject to identification regulations under EC Directives and the Ordinance on Hazardous Materials

SECTION 16 - OTHER INFORMATION

The given information is based on our present knowledge and subject to the product in the delivery state. The instruction provided is only for safety and environmental requirements and is not intended to guarantee any specific product features and shall not form any contractual validity for legal purposes