

VETPAK SAFETY DATA SHEET

Section 1: Identification of the Substance or Mixture and of the Supplier

Product Name: **Glycerine**

Other names: Glycerine Anhydrous, Glycerin, Glycerol, Glycol Alcohol, 1,2,3-Propanetriol.

Recommended Use: Food –safe emulsifier, thickener, stabiliser, emollient, and lubricating agent. Livestock nutritional energy source.

Formula: CH₂OH-CHOH-CH₂OH

Company Details: Vetpak Ltd.

Address: 150 Rickit Road, Te Awamutu.

Telephone Number: (07) 870 2024

Emergency Telephone Number: (07) 870 2024 8.00am to 5.00pm Monday to Friday except public holidays. National Poisons Centre, Department of Preventative and Social Medicine, University of Otago, P O Box 913, Dunedin, New Zealand. Phone (0800) 764-766 24 hours.

Date of Revision: 8th August 2008.

Section 2: Hazards Identification

Hazards Classification: Not hazardous.

Section 3: Composition / Information on Ingredients:

INGREDIENTS:

Pure Substance	CAS Number	Proportion
Glycerol	56-81-5	99.9%

Section 4: First Aid Measures:

Description of necessary first Aid measures:

Swallowed: If vomiting occurs, keep head lower than hips to help prevent aspiration. If person is unconscious, turn head to side. Get medical attention immediately.

Skin: Remove contaminated clothing, jewellery and shoes immediately. Wash with soap or mild detergent and large amounts of water until no evidence of chemical remains. (At least 15 to 20 minutes). Get medical attention if needed.

Eye: Wash eyes immediately with large amounts of water or normal saline, occasionally lifting upper and lower lids, until no evidence of chemical remains. Get medical attention immediately.

Inhaled: Remove from exposure immediately. Use a bag valve mask or similar device to perform artificial respiration (rescue breathing) if needed. Get medical advice.

Workplace Facilities: Running water.

Notes for Medical Personnel: Treat symptomatically based on judgement of doctor and individual reactions of patient.

Section 5: Fire Fighting Measures



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Type of Hazard: Slight fire hazard.

Fire Hazard Properties: During burning of Glycerol, toxic acrolein may develop.

Extinguishing Media & Methods: Alcohol resistant foam, carbon dioxide, regular dry chemical, water, alcohol resistant foam. Move container from fire area if it can be done without risk. Do not scatter spilled material with high pressure water streams. Dyke for later disposal. Use extinguishing agents appropriate for surrounding fire. Avoid inhalation of material or combustion by-products.

Recommended Protective Clothing:

Section 6: Accidental Release Methods

Procedures to be covered: After spillage or leakage, embark and shovel into drums or suitable containers. Flush away residues with water.

Section 7: Handling and Storage

Subsection 1: Handling:

Handling Practices: Optimum temperatures for pumping is in the 37-48°C range. Piping should be stainless steel, aluminium or galvanised iron.

Subsection 2: Storage:

Store Site Requirements: Can be stored in common inert vessels such as stainless steel, aluminium, or phenolic-lined compartments. Tanks should be sealed with an air-breather moisture absorption apparatus during prolonged storage. Keep separated from incompatible substances.

Incompatible Substances: Strong oxidants.

Section 8: Exposure Controls / Personal Protection

Workplace Exposure Standards:

Glycerine Mist

There is no Time Weighted Average (TWA) or Short Term Exposure Limits (STEL) listed in Workplace Exposure Standards according to the criteria of ERMA New Zealand.

5mg/m³ OSHA TWA (respirable particulate)

15mg/m³ OSHA TWA (total particulate)

10mg/m³ OSHA TWA (total particulate) (vacated by 58 FR 35338, June 30, 1993).

10mg/m³ ACGIH TWA

10mg/m³ UK OES TWA (mist)

Subsection 2: Engineering Controls:

Ventilation: Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Subsection 3: Personal Protective Equipment (PPE):

Eye: None required.

Skin: None required.

Respiratory: Under conditions of frequent use or heavy exposure, respiratory protection may be needed.

Section 9: Physical and Chemical Properties

Specify data for the product not the individual components:

Required Specifications:



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Physical State: Liquid.

Appearance: Clear, viscous liquid.

Boiling Point: 290°C

Melting point: Below 0°C.

Flash Point: 177°C (COC method)

Auto-ignition 370°C

Vapour Pressure: 0.0025 mmHg at 50°C.

Specific Gravity: 1.2613 at 20°C

Flammability Limits: Lower 0.9%

Water Solubility: Miscible with water.

Solvent Solubility: Soluble in alcohol, ethyl acetate, ether.

Section 10: Stability and Reactivity

Stability of the Substance: Stable at normal temperatures and pressure.

Conditions to avoid: Avoid contact with incompatible materials. Avoid heat, flames, sparks, and other sources of ignition.

Material to avoid: Acids, bases, oxidising materials, metal oxides, peroxides, reducing agents.

Hazardous decomposition Products: Thermal decomposition products: acrolein, oxides of carbon.

Hazardous polymerization: Will not polymerize.

Section 11: Toxicological Information

Data and interpretation:

- **Irritation Data:**
 - 50mg/24hours skin – rabbit – mild.
 - 126mg eyes – rabbit – mild.
- **Toxicity Data:**
 - TDLo oral – human = 1428 mg/kg
 - LD₅₀ oral – rat 12600 mg/kg
 - IDLo oral – rat 16800 mg/kg / 28 days.
 - LC₅₀ inhalation - rat = > 570 mg/m³ / 1 hour (s)
 - LD₅₀ intravenous – rabbit = 53,000 mg/kg.
- Local Effects: Irritant: inhalation, skin, eyes.
- Acute Toxicity Level: Slightly Toxic – ingestion.
- Tumorigenic Data: TDLo skin – mouse = 108 gm/kg / 15 weeks intermittent.
- Mutagenic Data: DNA inhibition – human lymphocyte 200 mmol/L; cytogenic analysis – rat oral 1 gm / kg.

Acute Effects:

Swallowed:

- **Acute Exposure:** Ingestion of 100ml resulted in headache, nausea and vomiting. Other symptoms may include digestive tract irritation, insomnia, dizziness, diarrhoea and fever.
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Large doses may cause haemolysis, haemoglobinuria, hyperglycaemia, glycosuria, renal failure, convulsions and paralysis. Glycerine acts as an osmotic diuretic and as such may lower intraocular pressure and cause hypovolaemia. In rodents it may also cause restlessness, mild cyanosis, and drop in blood pressure, increased rate and magnitude of respiration, collapse, clonic convulsions and coma. Reproductive effects have been reported in animals.

- **Chronic Exposure:** Ingestion of 30mls for 50 days by human volunteers resulted in increased thirst and a feeling of warmth.

Skin:

- **Acute Exposure:** Application of concentrated glycerine may cause effects ranging from mild irritation to dehydration of the skin with subsequent irritation and redness. Allergic reactions are rare, but may occur in sensitive individuals.
- **Chronic Exposure:** Repeated or prolonged exposure to concentrated solutions may result in dermatitis.

Eye:

- **Acute Exposure:** Application to human eye may cause a strong stinging and burning sensation, with reflex tearing and dilation of the conjunctival vessels, but no injury. Instillation into the anterior chamber resulted in an inflammation reaction and oedema of the cornea and wrinkling of the posterior surface and damage of epithelial cells.
- **Chronic Exposure:** No data available.

Inhaled:

- **Acute exposure:** Due to its low vapour pressure, glycerine is not considered likely to be an inhalation hazard at normal room temperatures. Vapour or mist in sufficient concentrations may interfere with respiratory function. At elevated temperatures the fume may cause irritation and dehydration of the mucous membranes. Symptoms may include coughing and difficulty breathing.
 - **Chronic Exposure:** No data available.
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Section 12: Ecological Information

- **Degradability:** Readily biodegradable.
 - **Ecotoxicity Data:**
 - **Fish toxicity:** 54,000,000 ug/L 96 hours LC50 (mortality) Rainbow Trout, Donaldson Trout.
 - **Invertebrate Toxicity:** .10 g/L 24 hours (Abundance) Water Flea (Daphnia magna)
 - **Algal Toxicity:** 4,600,000 ug / L 28 hours (population growth) Red algae (Porphyridium cruentm)
 - **Environmental Summary:** Relatively non-toxic to aquatic life.
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Section 13: Disposal Considerations

Disposal Information: Dispose in accordance with all local and regional regulations.

Section 14: Transport Information

Relevant information: No classification assigned.



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Section 15: Regulatory Information

Regulatory status: Appears on the Generally Regarded as Safe (GRAS) register for oral nutritional Compounds (NZ Food Safety Authority).

Section 16: Other Information

Additional Information: National Poisons Centre, Department of Preventative and Social Medicine, University of Otago, P O Box 913, Dunedin, New Zealand. Phone (0800) 764-766 24 hours.

1. The above information has been compiled on the basis of good faith, and our experience from the available technical knowledge and data for this product.
 2. Where health or safety data given discloses a risk to the user or environment, it is the responsibility of the Purchaser to pass on that information to employees or those who may be using the product, ensuring that adequate safety procedures are used.
 3. No responsibility can be accepted for the wrongful or misinterpretation of this data.
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