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: $CH_2OH\text{-}CHOH\text{-}CH_2OH$

Company Details: Vetpak Ltd.

Address: 249 Bruce Berquist Dr, Te Awamutu 3800.

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 Preparation: 2nd August 2019

Section 2: Hazards Identification

STATEMENT OF HAZARDOUS NATURE

This product is generally recognized as safe (non-hazardous) IN THIS FORM AND AT THIS STRENGTH. Handle correctly and as directed by this SDS.

This is the products **end** use.

HAZARD LABELLING WARNING
N/A

HAZARD CLASSIFICATION AND STATEMENTS

HSNO	HSNO	GHS	Signal Word	GHS Hazard Statement
N/A				
N/A				

Section 3: Composition / Information on Ingredients:

COMPOSITION

Ingredient	CAS Number	% w/w	HAZARDOUS
Glycerol	56-81-5	99.9	No

Section 4: First Aid Measures:

Swallowed: Rinse mouth, then drink plenty of water.

Skin: Wash skin with soap and water.

Eye: Flush eyes as a precaution.

Inhaled: Move to fresh air. Get medical attention for any breathing difficulty.

Workplace Facilities: Ensure an eye bath and washroom facilities are available.

Notes for Medical Personnel:

Phone 07-870-2024 Fax: o7-870-2032 e-mail info@vetpak.co.nz Web: www.vetpak.co.nz

Section 5: Fire Fighting Measures

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

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

Storage: Store 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 strong oxidants.

Section 8: Exposure Controls / Personal Protection

Workplace Exposure Standards:
Glycerine Mist
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)

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

Personal Protective Equipment (PPE): Under conditions of frequent use or heavy exposure, respiratory protection may be needed.

Section 9: Physical and Chemical Properties

Appearance (physical state, colour, etc.): Clear, viscous liquid.

Odour:

Boiling Point: 290ºC

Melting point: Below 0ºC.

Flash Point: 177ºC (COC method)

Auto-ignition: 370ºC

Vapour Pressure: 0.0025 mmHg at 50ºC.

Specific Gravity: 1.2613 at 20ºC

Flammability Limits: Lower 0.9%

Water Solubility: Miscible with water.

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

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Section 10: Stability and Reactivity

Stability of the Substance: Combustible. 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

Acute Effects:
TDLo oral – human = 1428 mg/kg
LD_{50} oral – rat 12600 mg/kg
IDLo oral – rat 16800 mg/kg / 28 days.
LC_{50} inhalation - rat = > 570 mg/m³ / 1 hour (s)
LD50 intravenous – rabbit = 53,000 mg/kg.
Local Effects: Irritant: inhalation, skin, eyes.

Swallowed: Ingestion of 100ml resulted in headache, nausea and vomiting. Other symptoms may include digestive tract irritation, insomnia, dizziness, diarrhoea and fever. 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.

Skin: 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.

Eye: 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.

Inhaled: 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 Effects: Ingestion of 30mls for 50 days by human volunteers resulted in increased thirst and a feeling of warmth.

Chronic Toxicity:

Irritation/Corrosion: Repeated or prolonged exposure to concentrated solutions may result in dermatitis.

Carcinogenic Effects: Not listed as carcinogenic.

Mutagenic Effects: Not suspected of causing genetic defects.

Reproductive or developmental effects: Not known.

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Section 12: Ecological Information

Potential Environmental Considerations: Non-toxic to aquatic life

Ecotoxicity in water:
54,000,000 ug/L 96 hours LC50 (mortality) Rainbow Trout
10 g/L 24 hours (Abundance) Water Flea (Daphnia magna)
4,600,000 ug / L 28 hours (population growth) Red algae (Porphyridium cruentm)

Chronic:

Phytotoxicity: No Data

Persistence and Degradability: Persistence unlikely, readily biodegradable.

Mobility: No data.

Bioaccumulation: Not likely.

BOD and COD: No Data

Products of Biodegradation: No Data

Toxicity of the Products of Biodegradation: No Data

Section 13: Disposal Considerations

Disposal Information: Triple rinse containers, crush and dispose of in an approved Council landfill. Recycle where appropriate. Dispose in accordance with all local government regulations.

Section 14: Transport Information

Hazard Class: N/A

UN Number: N/A

Packing Group: N/A

Hazchem Code: N/A

Land Transport: Not regulated

Sea Transport: Not regulated

Air Transport: Check current air transport regulations.

Other Information: Handle with care. Stack correctly. Transport upright in the original container with the lid tightly closed. Avoid spillage and any release into the environment.

Section 15: Regulatory Information

HSNO Approval Number: None

HSNO Classifications:
None

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

Section 16: Other Information

Interpretation and Abbreviations
Controls applying to a substance:

- * denotes that changes have been made to these controls, further information on these changes is located in the transfer notice for that substance,
- (R) abbreviation for the term Regulation of the Hazardous Substances regulations

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AICS – Australian Inventory of Chemical Substances
AOX – Absorbable organic halogens.
APF – Assigned Protection Factor.
BOD – Biochemical Oxygen Demand China
COD – Chemical Oxygen Demand
DSL – Canadian Domestic Substances List.
EC50 – Half maximal effective concentration. The concentration of a toxicant which induces a response halfway between the baseline and maximum after a specified exposure time.
EINECS – European Inventory of Existing Commercial Chemical Substances.
ENCS – Japanese Existing and New Chemical substances.
IARC – International Agency for Research on Cancer.
IDLH – Immediately Dangerous to Life or Health Concentrations.
ISHL – Japanese Industrial Safety and Health Law List of Chemicals.
LOEL – Lowest Observed Effect Level.
LD^{50} – Lethal Dose sufficient to kill 50 percent of the test population within a certain time
LD_{LO} – Lethal Dose Low (the lowest dosage per unit of bodyweight of a substance known to have resulted in fatality in a particular animal species).
MAK – Maximum workplace concentration in the workplace air that generally does not have known adverse effects on the health of the employee nor cause unreasonable annoyance when a person is repeatedly exposed during long periods, usually 8 hours daily, 40hour working week).
NOAA – National Oceanic and Atmospheric Administration.
NOEC – No Observed Effect Concentration.
NTP – National Toxicology Program.
NZIoC – New Zealand Inventory of Chemicals.
OECD HPV – The Organisation for Economic Co-operation and Development High Product Volume Chemicals.
PEL – Permissible exposure limit.
PPE – Personal Protective Equipment.
Prop 65 – California Proposition 65 List of Chemicals.
RTECS – Registry of Toxic Effects of Chemical substances
STEL – Short term exposure limit.
TOC – Total Organic Carbon.
TSCA – US Toxic Substances Control Act Existing Chemicals.
TWA - The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.
VOC – Volatile Organic Compounds.

Date of Preparation/Review: 2 August 2019

Sources of key data used to compile the datasheet:
Manufacturers SDS
NZ EPA CCID
Health and Safety at Work (Hazardous Substances) Regulations 2017
Hazardous Substances (Minimum Degrees of Hazard) Notice 2017
Hazardous Substances (Safety Data Sheets Notice 2017
Hazardous Substances (Classification) Notice 2017
Labelling of Hazardous Substances Technical Guide 2012

DISCLAIMER
The information contained in this safety data sheet was obtained from current and reliable sources. This data is supplied without warranty, expressed or implied, regarding its correctness and accuracy. It is the user's responsibility to determine safe conditions for use of this product and to assume liability for loss, injury, damage or expense resulting from improper use of this product.

END OF SDS

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