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

Product Name: Liquid Sunshine Vitamins ADE

Recommended Use: As an aid in the treatment and prevention of vitamin A, D3 & E deficiencies in sheep, goats, pigs cattle, horses and poultry.

Company Details: Vetpak Ltd.

Address: 249 Bruce Berquist Dr, Te Awamutu 3800.

Telephone Number: (07) 870 2024

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

Date of Preparation: 19th August 2019

Section 2: Hazards Identification

STATEMENT OF HAZARDOUS NATURE

This product is HAZARDOUS IN THIS FORM AND AT THIS STRENGTH. Handle correctly and as directed by this SDS.

HAZARD LABELLING WARNING



HAZARD CLASSIFICATION AND STATEMENTS

HSNO	HSNO	GHS	Signal Word	GHS Hazard Statement
3.1D	Flammable liquid	Category 4	Warning	H227 Combustible liquid
6.3A	Skin irritant	Category 2	Warning	H315 Causes skin irritation
6.4A	Eye irritant	Category 2	Warning	H319 Causes serious eye irritation
6.5B	Contact sensitiser	Category 1	Warning	H317 May cause an allergic skin reaction
6.9B	Harmful to human target organs or systems	Category 2	Warning	H371; H373 May cause damage to organs

Prevention Statements:

P103:	Read label before use.			
P260:	Do not breathe dust/mist/fumes/gas/vapours/spray.			
P264:	Wash hands thoroughly after use.			
P270:	Do not eat, drink or smoke when handling this product.			
P272:	Contaminated work clothing should not be allowed out of the workplace.			
P280:	Wear protective gloves, protective clothing and eye and face protection			

Section 3: Composition / Information on Ingredients:

COMPOSITION					
Ingredient	CAS Number	% w/w	HAZARDOUS		
Emulsifiers/Dispersants	Mixture	>60			
Monopropylene glycol	57-55-6	10-30	No		
Vitamin A Propionate	7069-42-3	<10			
Vitamin D3	67-97-0	<10	Yes 6.1D; 6.4A; 6.8B; 6.9A; 9.1D; 9.3A		
Tocopheryl Acetate	7895-91-2	<10			
1-Propanol	71-23-8	<10	Yes 3.1B; 6.1D; 6.4A; 9.3C		
BHT	128-37-01	<10			

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Section 4: First Aid Measures:

Swallowed: Do not induce vomiting. If victim is conscious and alert give 2 - 4 cupfuls of water. Never give anything by mouth to an unconscious person. Get medical aid.

Skin: Flush skin with plenty of water, while removing contaminated clothing. Wash clothing before re-use.

Eye: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Inhaled: Remove from exposure and move to fresh air immediately. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Workplace Facilities: Eye bath and running water.

Notes for Medical Personnel: Treat symptomatically and supportively. Persons with skin or eye disorders or liver, kidney, chronic respiratory diseases may be at increased risk from exposure to this substance. Replace fluid and electrolytes.

Section 5: Fire Fighting Measures

Type of Hazard: Flammable liquid.

Fire Hazard Properties: Containers can build up pressure if exposed to heat and / or fire. Vapours may form an explosive mixture with air. Vapours can travel to a source of ignition and flash back. Will burn if involved in a fire. Can release vapours that form explosive mixtures at temperatures above the flash point. Containers may explode in the heat of a fire.

Flash point: 68°C.

Auto-ignition Temperature: 363°C.

Extinguishing Media & Methods: For small fires, use dry chemical, carbon dioxide water spray or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do not use straight streams of water.

Recommended Protective Clothing: As in any fire, wear a self-contained breathing apparatus in pressure demand, MSHA / NIOSH (approved or equivalent), and full protective gear.

Section 6: Accidental Release Methods

Procedures to be covered: Shut off all possible sources of ignition. Clear area of all unprotected personnel. Wear protective equipment to prevent skin and eye contamination, and inhalation of vapours. Contain. Do not allow chemical to enter confined spaces such as sewers due to explosion risk.

Small spill or leak (230 litres or less): Dilute with water and mop up, or absorb with an inert dry material (soil, sand or other inert material).

Major spills (> 230 litres): Clear area of personnel and move upwind. Alert fire brigade; explain location and nature of hazard. Ethyl Alcohol may be violently or explosively reactive. Wear breathing apparatus and protective clothing. Prevent from any means available, spillage from entering drains or water-courses. Consider evacuation. No smoking, naked lights or ignition sources. Increase ventilation. Stop leaks if safe to do so. Water vapour or fog may be used to disperse vapour. Contain spill with sand, earth or vermiculite. Use only spark free shovels and explosion proof equipment. Collect recoverable product into labelled containers for recycling. Absorb remaining product with sand, earth or vermiculite. Collect solid residues and seal in labelled drums for disposal. Wash area and prevent runoff into drains. If contamination of sewers or waterways and or surrounding environment has occurred, notify local emergency services, local authorities, and the Regional Council.

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Section 7: Handling and Storage

Handling: Avoid breathing vapours or spray mists. Use only with adequate ventilation. Keep container closed. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use explosion proof electrical (ventilating, lighting and material handling) equipment.

Storage: Store in a segregated and approved area. Keep container in a cool, well-ventilated area away from sunlight. Store away from oxidising agents, such as alkali metals, acids, acid chlorides, ammonia, and potassium tert-butoxide. In case of flexible tubing usage, check with manufacturer to find product compatibility. Keep container tightly closed and sealed until ready for use. Check regularly for leaks. Avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls / Personal Protection

Workplace Exposure Standards:

1 – Propanol	492 mg/M ³ / 200ppm (skin) – ACGIH TWA
Propylene glycol	10 mg/M ³ / 50ppm – AIHA TWA
BHT	2 mg/M ³ - AIHA TWA

Engineering Controls: Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Use with local exhaust ventilation or while wearing organic vapour respirator.

Personal Protective Equipment (PPE): RESPIRATORY: Wear a dust mask/respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. EYE/FACE: Safety glasses with side shields or chemical goggles AS/NZS 1337. HAND: Impervious gloves AS/NZS 2161. SKIN/BODY: Overalls, safety shoes.



Hygiene Measures: Ensure a high level of personal hygiene is maintained when using this product. Always wash hands before eating, drinking smoking or using the toilet facilities.

Section 9: Physical and Chemical Properties

Appearance (physical state, colour, etc.):Light orange, oily liquid.

Odour: Acrid

Boiling Point / Melting Point:

Specific Gravity: 1.04

Flash Point: 68°C

Flammability: Flammable

Flammable Limits: No data

Ignition temperature: 363°C

pH: 7.6 – 9.0 (5% solution).

Solubility in Water: Soluble



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Section 10: Stability and Reactivity

Stability of the Substance: Product is stable under normal conditions of storage.

Conditions to avoid: Sparks, open flames, heat and other sources of ignition.

Material to avoid: Reactive with oxidising agents, alkali metals, acids, acid chlorides, ammonia, and Potassium tert-butoxide. Aluminium containers should be avoided as aluminium alcoholates may be formed under certain conditions.

Hazardous decomposition Products: Not applicable because product is stable.

Hazardous polymerization: Does not occur.

Section 11: Toxicological Information

Acute Effects:

LD50 = 1870mg/kg rat (oral) (data for 1-propanol); LD50 = 42.5mg/kg mouse (oral), (data for Vitamin D3); LD50 = 1200mg/kg mouse (oral), (data for Vitamin A)

Swallowed: Swallowing can result in nausea, vomiting, dizziness, fatigue, headache and central nervous system depression. If the victim is uncoordinated there is a greater likelihood of vomit entering the lungs and causing subsequent complications.

Skin: Contact with skin will result in mild irritation. Will have a degreasing action on the skin.

Eye: Eye irritation.

Inhaled: Vapour may be an irritant to the mucous membranes and respiratory tract. Inhalation of vapour can result in headaches, dizziness, fatigue and possible nausea. Inhalation of high concentrations can produce central nervous system depression, which can contribute to loss of coordination, impaired judgement and, if exposure is prolonged, unconsciousness.

Chronic Effects: Evidence from animal tests and studies on exposed humans indicate that repeated or prolonged exposure to this chemical could result in liver damage.

Chronic Toxicity:

Irritation/Corrosion: Repeated or prolonged skin contact may lead to irritant contact dermatitis

Carcinogenicity: Not known to be a carcinogen.

Mutagenic Effects: Not suspected of causing genetic defects.

Reproductive or developmental effects: Not known.

Section 12: Ecological Information

Potential Environmental Considerations: Not known to be hazardous to the environment. Avoid release to waterways, sewers and storm water drains as good practice.

Ecotoxicity in water: No data

Chronic: No data

Phytotoxicity: No Data

Persistence and Degradability: Persistence unlikely, 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

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Section 13: Disposal Considerations

Disposal Information: Can be disposed of in sewerage treatment facility provided it is first diluted with sufficient water to bring the mixture below the flammable threshold. This requirement is included to ensure that flammable substances do not collect in pockets of sewerage collection system with resultant fires or vapour explosions. Large volumes may be suitable for re-distillation by solvent contractors.

Container Disposal: Empty containers may contain hazardous residues. Labels should not be removed from containers until they have been appropriately cleaned. Do not cut, puncture or weld on or near to the containers. Containers should be cleaned by approved methods and then re-used or disposed of by landfill. After cleaning, all existing labels should be removed. Do not incinerate closed containers.

Section 14: Transport Information

Hazard Class: 3.1D; 6.3A; 6.4A; 6.5B; 6.9B

UN Number: None

Packing Group: III

Hazchem Code: None

Land Transport: Check regulations

Sea Transport: Check regulations

Air Transport: Check regulations

Other Information:

Section 15: Regulatory Information

HSNO Approval Number:

HSNO Classifications:

3.1D (Flammable liquid – low hazard)
6.3A (Skin irritant)
6.4A (Eye irritant)
6.5B (Contact sensitiser)
6.9B (Harmful to human target organs or systems)

Regulatory status: None

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
- 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.

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ISHL – Japanese Industrial Safety and Health Law List of Chemicals.

LOEL – Lowest Observed Effect Level.

LD⁵⁰ – 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 fiveday working week over an entire working life.

VOC – Volatile Organic Compounds.

Date of Preparation/Review: 19th 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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