VETPAK SAFETY DATA SHEET

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

Product Name: Organic Copper 87.5mg/ml

Other names: Liquid Copper Gylcinate

Recommended Use: An oral supplement for the treatment and control of copper deficiency in cattle. For animal use only.

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: 6th 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.

EPA New Zealand approval code:

HAZARD LABELLING WARNING

HAZARD CLASSIFICATION AND STATEMENTS

HSNO	HSNO	GHS	Signal Word	GHS Hazard Statement
6.1D	Acute Toxicity	Category 1	Warning	H302 H312 H332 Harmful if swallowed, in contact with skin, if inhaled.
6.3A	Skin Irritant	Category 2	Warning	H315 Causes skin irritation
6.4A	Eye Irritant	Category 2	Warning	H319 Causes serious eye irritation
9.1A	Aquatic Ecotoxic	Category 1	Warning	H400 Very toxic to aquatic life

Prevention Statements:
P102: Keep out of reach of children.
P103: Read label before use.
P260: Do not breathe mist/vapours/spray
P264: Wash hands thoroughly after use.
P270: Do not eat, drink or smoke when handling this product.
P273: Avoid release to the environment.
P280: Wear protective gloves / clothing and eye / face protection.

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

Section 3: Composition / Information on Ingredients:

COMPOSITION

Ingredient	CAS Number	% w/w	HAZARDOUS
Water	7732-18-5	>60	No
Copper Glycinate	13479-54-4	30-60	Yes 6.1D; 6.3A; 6.4A; 9.1A

Section 4: First Aid Measures:

Swallowed: DO NOT induce vomiting. Rinse mouth. If vomiting occurs, position patient on left side (head down position if possible) to maintain open airway and prevent aspiration. If poisoning occurs seek medical aid.

Skin: Wash with plenty of soap and water. If skin irritation occurs, get medical advice/attention.

Eye: Immediately hold eyelids apart and flush the eye continuously with running water for at least 15 minutes. Seek medical advice.

Inhaled: Inhalation of fumes is unlikely to result on adverse health effects. Remove from exposure to fresh air immediately. Encourage patient to blow nose to ensure clear passage of breathing. If irritation persists, seek medical aid.

First Aid Facilities: Ensure an eye bath and running water is available and ready for use.

Advice to Doctor: Treat symptomatically.

.

Section 5: Fire Fighting Measures

Type of Hazard: Not flammable.

Fire Hazard Properties: None.

Extinguishing Media: In case of fire, use appropriate media most suitable for surrounding fire conditions.

Recommended Protective Clothing: Fire fighters should wear a self-contained breathing apparatus and full protective clothing along with protective equipment.

Other: Contain runoff from fire control water, as the runoff may pollute waterways. Dispose of contaminated fire extinguishing water and fire residues according to local regulations.

Section 6: Accidental Release Methods

Procedures to be covered: Personnel involved in the clean-up should wearpersonal protective equipment as described in Section 8 of this SDS. Increase ventilation. Do not allow product to reach drains, sewers or waterways. If the product does enter a waterway, advise your local government authority.

Methods and Materials for Containment and Clean Up: Contain and sweep/shovel up spills with dust binding material or use an industrial vacuum cleaner. Transfer to a suitable, labeled container and hold for disposal.

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

Section 7: Handling Storage

Handling: Ensure an eye bath and wash room facilities are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling.

Storage: Store in a cool, dry, well-ventilated area. Keep labeled containers tightly sealed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect from physical damage.

Store away from incompatible materials; oxidising agents, nitrates, oxidizing acids, chlorine bleaches, pool chlorine, powdered metals, magnesium, alkalis, and hydroxylamine.

Section 8: Exposure Controls / Personal Protection

Workplace Exposure Standards: TWA 1mg/m^3 (mists as Cu)

Engineering Controls: A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

Personal Protective Equipment (PPE):

FACE: Approved respirator

EYES: Chemical goggles or safety glasses with side shields.

HANDS: Impervious protective gloves.

CLOTHING: Protective, long-sleeve, overalls with legs over the top of safety footwear.

General hygiene: Wash hands thoroughly after handling. Do not eat, drink or smoke while handling the product.

Section 9: Physical and Chemical Properties

Appearance (physical state, colour etc.): Blue liquid

Odour:

pH: No data

Melting Point/Freezing Point (ºC):

Boiling Point (ºC):

Flash Point (ºC):

Flammability: Not flammable

Lower Flammability/Explosive Limit:

Upper Flammability/Explosive Limit:

Auto-ignition Temperature (ºC):

Vapour Pressure:

Vapour Density:

Relative Density:

Solubility in Water:

Specific Gravity: No data

Viscosity:

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

Section 10: Stability and Reactivity

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

Conditions to avoid: Avoid contact with high temperatures, sources of ignition and incompatible materials such as oxidising agents, nitrates, oxidizing acids, chlorine bleaches, pool chlorine, powdered metals, magnesium, alkalis, and hydroxylamine. Copper dust or mist may react with acetylene to form shock sensitive copper acetylides. Reacts violently with hydroxylamine.

Hazardous polymerization: Hazardous polymerisation will not occur.

Section 11: Toxicological Information

Acute Effects:
Oral (rat) LD_{50}: 1200mg/kg

Swallowed: Accidental ingestion of the material may be harmful. A metallic taste, nausea, vomiting and burning feeling in the upper stomach region occurs after ingestion of copper and its derivatives. The vomitus is usually green / blue and discolours contaminated skin. Acute poisonings from ingestion are rare due to their prompt removal by vomiting. Should vomiting not occur or is delayed, systemic poisoning may occur producing kidney and liver damage, wide-spread capillary damage, and be fatal; death may occur after relapse from an apparent recovery. Anaemia may occur in acute poisoning.

Eye: Direct contact with the eye may cause transient discomfort characterised by tearing or conjunctival redness as with windburn).

Skin: Systemic harm has been identified following exposure of animals by at least one other route and the material may produce health damage following entry through wounds, lesions or abrasions. Good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.

Inhaled: Inhalation of vapour during the course of normal handling, may be damaging to the health of the individual. Inhalation of dusts, or fumes, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress.

Chronic Effects: Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis.

Chronic Toxicity: Copper poisoning following long-term exposure to copper dusts and fume may result capillary, kidney, liver, lung and brain damage.

Irritation/Corrosion: Skin allergy and irritation

Carcinogenic Effects: Not listed as carcinogenic

Mutagenic Effects: Not suspected of causing genetic defects

Reproductive or developmental effects: Not known.

Section 12: Ecological Information

Potential Environmental Considerations: Very toxic to aquatic life with long-lasting effects.

Ecotoxicity in water:
Algae EC_{50} (96 h): 47-481 µg/litre
Daphnia magna LC_{50} (48-96 h): 7-54 µg/litre; Amphipods LC_{50} 48-96 h): 37-183 µg/litre

Phytotoxicity: No Data

Persistence and Degradability: High persistence in water/soil/air.

Mobility: Low mobility in soil.

Bioaccumulation: Not established.

BOD and COD: No Data

Products of Biodegradation: No Data

Toxicity of the Products of Biodegradation: No Data

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

Section 13: Disposal Considerations

Disposal Information: Recycle product/packaging wherever possible or dispose of in an authorised landfill and in accordance with local/regional/national regulations.

Section 14: Transport Information

Hazard Class: 6.1D; 6.3A; 6.4A; 9.1A;

UN Number: 3082

Packing Group: III

Hazchem Code: 3Z

Land Transport: Check regulations

Sea Transport: Check regulations

Air Transport: Check regulations

Other Information:

Section 15: Regulatory Information

HSNO Approval Number: HSR002521

HSNO Classifications:
6.1D (Acutely toxic)
6.3A (Irritating to the skin)
6.4A (Irritating to the eye)
9.1A (Aquatic toxicity)

Regulatory status:

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.
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).

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

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: 6 August 2019

Sources of key data used to compile the datasheet:
Manufacturers SDS: BASF, Copper Glycinate, Date/Revised: 07.05.2016, Version: 3.0
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

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