

VETPAK SAFETY DATA SHEET

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

Product Name: Selenium 5mg

Recommended Use: For the treatment and prevention of selenium responsive diseases in sheep and cattle.

Company Details: Vetpak Ltd.

Address: 249 Bruce Berquist Drive, Te Awamutu.

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: 12th July 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
6.1D	Acutely toxic	Category 4	Warning	H302 Harmful if swallowed
6.4A	Irritating to the eye	Category 2	Warning	H319 Causes serious eye irritation
6.6B	Suspected human mutagen	Category 2	Warning	H341 Suspected cause of human genetic defects
6.9B	Toxic to human target organs or systems	Category 1	Danger	H371 May cause damage to organs
9.1B	Aquatic ecotoxic	Category 2	None	H411 Toxic to aquatic life with long lasting effects
9.2C	Soil ecotoxic	None	None	None

GHS Prevention Statements

- P102: Keep out of reach of children
P103 & P201: Read label before use & Obtain special instructions before use
P202: Do not handle until all safety precautions have been read and understood
P260 & P264: Do not breathe vapours & Wash hands thoroughly after handling
P270: Do not eat, drink or smoke when using this product
P273: Avoid release to the environment
P280 & P281: Wear protective gloves and eye/face protection & Use personal protective equipment

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Section 3: Composition / Information on Ingredients:

COMPOSITION

Ingredient	CAS Number	% w/w	HAZARDOUS
Water	7732-18-5	>60	No
Sodium selenate	13410-01-0	<10	Yes 6.1B; 6.4A; 6.6B; 6.9A; 9.1A; 9.1B; 9.2A; 9.3A
Brilliant Blue dye	3844-45-9	<10	No

Section 4: First Aid Measures:

Description of necessary first Aid measures:

Swallowed: Do not induce vomiting. If victim is conscious and alert give 2 – 4 cups of milk or 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: Non-flammable liquid.

Fire Hazard Properties: Not considered to be an explosion hazard. Emits toxic fumes under fire conditions. Sodium oxides, Selenium/selenium oxides.

Flash point:

Auto-ignition Temperature:

Extinguishing Media & Methods: Use extinguishing media appropriate to surrounding fire conditions. Use carbon dioxide gas, dry chemical or foam. DO NOT use water. Apply water spray or fog to cool nearby equipment

Recommended Protective Clothing: Wear 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: 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 drains and waterways.

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. Wear breathing apparatus and protective clothing. Prevent from any means available, spillage from entering drains or water-courses. Separate from waste water through reaction with Barium Chloride and precipitation as insoluble Barium Selenate. Contain spill with sand, earth or vermiculite. 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 Practices: Avoid breathing vapours or spray mists. Use only with adequate ventilation. Keep container closed.

Store Site Requirements: Store in a segregated and approved area. Keep container in a cool, well-ventilated area away from sunlight. Keep container tightly closed and sealed until ready for use. Check regularly for leaks.

Packaging: Store in the original container.

Section 8: Exposure Controls / Personal Protection

Workplace Exposure Standards: The lowest harmful dose by oral administration is 88ml/Kg

Engineering Controls: Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Use with local exhaust ventilation.

Personal Protective Equipment (PPE): Wear appropriate clothing to prevent repeated or prolonged skin contact. Gloves made of butyl rubber, or PVC. Where eye exposure is reasonably probable always wear approved chemical safety goggles or Safety Glasses with side shields.



Personal Hygiene: Do not eat, drink or smoke when handling this product.

Section 9: Physical and Chemical Properties

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

Odour: No smell

pH:

Melting Point/Freezing Point (°C):

Boiling Point (°C):

Flash Point (°C):

Flammability: Not flammable

Lower Flammability/Explosive Limit:

Upper Flammability/Explosive Limit:

Auto-ignition Temperature (°C):

Vapour Pressure:

Vapour Density:

Relative Density:

Solubility in Water: Totally soluble.

Specific Gravity: 1.01 – 1.015 (water = 1)

Viscosity:

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Section 10: Stability and Reactivity

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

Conditions to avoid: N/A

Material to avoid: N/A

Hazardous decomposition Products: Not applicable because product is stable

Hazardous polymerization: Does not occur

Section 11: Toxicological Information

Data and interpretation: No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms that may arise if the product is mishandled and over-exposure occurs are:

Acute Effects: Acute selenium poisoning (Selenium 99%) produces central nervous system effects, which include nervousness, convulsions, and drowsiness. Other signs of intoxication can include skin eruptions, lassitude, gastrointestinal distress, teeth that are discoloured or decayed, odorous ("garlic") breath and partial loss of hair and nails.

Swallowed: Very toxic if swallowed. May be fatal.

Skin: Irritant. Toxic by dermal absorption.

Eye: Irritant. May cause conjunctivitis.

Inhaled: Irritating to mucous membranes and upper respiratory tract. Toxic, may be fatal.

Acute Toxicity: Oral (LD⁵⁰); 1.6mg/kg (Rat) (Selenium 99%)

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: Target organ/s; Spleen, Liver, Kidneys.

Carcinogenic Effects: Not classifiable.

Mutagenic Effects: Possible mutagen.

Developmental Effects: In laboratory animals, this compound (Selenium 99%) has caused both birth defects and damage to the reproductive system.

Section 12: Ecological Information

Potential Environmental Considerations: Harmful to aquatic life with long lasting effects. Harmful to the soil environment.

Ecotoxicity in water (Selenium 99%):

mortality NOEC - Pimephales promelas (fathead minnow) - 1.25 mg/l - 5.0 d

LC50 - Pimephales promelas (fathead minnow) - 0.69 mg/l - 96.0 h

mortality LOEC - Pimephales promelas (fathead minnow) - 2.42 mg/l - 5.0 d

Toxicity to daphnia and other aquatic invertebrates :

EC50 - Daphnia magna (Water flea) - 0.39 mg/l - 48 h

Toxicity to algae :

Growth inhibition LOEC - Chlorella vulgaris (Fresh water algae) - 0.083 mg/l - 7 d

Growth inhibition EC50 - Ankistrodesmus falcatus - 0.033 mg/l - 14 d

Products of Degradation: Not specified

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Section 13: Disposal Considerations

Disposal Information: Absorb all spills with an inert material. Dispose of in accordance with local waste disposal regulations. Separation from waste water through reaction with Barium Chloride and precipitation as insoluble Barium Selenate. Destroy empty bottle after use.

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

Section 14: Transport Information

Hazard Class:

UN-No: 3082

Packing Group: III

Hazchem Code:

Proper Shipping Name: None-allocated

Segregation:

Marine: Classified as Dangerous Goods by International Marine Dangerous Goods Code (IMDG Code) for transport by sea.

Air Transport: Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA). Dangerous Goods Regulations for transport by air.

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: N/A

HSNO Classifications:

6.1D (Acutely toxic)

6.4A (Irritating to the eye)

6.6B (Suspected human mutagen)

6.9A (Toxic to human target organs or systems)

9.1B (Aquatic ecotoxic)

9.2B (Soil ecotoxic)

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.

EINECS – European Inventory of Existing Commercial Chemical Substances.

ENCS – Japanese Existing and New Chemical substances.

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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_{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: 12 July 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