

VETPAK SAFETY DATA SHEET

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

Product Name: Zinc Sulphate Heptahydrate

Other Names: Zinc Sulphate (ZnSO₄) Heptahydrate

Recommended Use: Dietary supplement, animal feeds.

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 Preparation: 19th August 2008

Section 2: Hazards Identification

Hazards Classification: Hazardous according to the criteria of ERMA NZ. ERMA NZ approval code 170093.

HSNO Hazard Classification: 6.1D, 6.3B, 6.9B, 8.3A, 9.1A, 9.3C.

Risk Phrases:

Warning; Harmful if swallowed.

Warning; causes mild skin irritation.

Warning; May cause damage to blood and haematopoietic system.

Danger; Causes serious eye damage.

Very toxic to aquatic life.

Harmful to terrestrial vertebrates.

Safety Phrases:

Keep out of reach of children.

Read label before use.

Read safety data sheet before use.

Wash hands thoroughly after handling.

Do not eat, drink or smoke when using this product.

Keep out of reach of children.

If swallowed or inhaled: call a poison centre or doctor if you feel unwell.

Rinse mouth. Do **NOT** induce vomiting.

If skin irritation occurs; Get medical advice / attention.

Do not breathe dust.

Wear protective gloves.

If medical advice is needed, have product container or label at hand.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a poison centre or doctor / physician.

Avoid release to the environment. Collect spillage.

Section 3: Composition / Information on Ingredients:

INGREDIENTS:

Pure Substance	CAS Number	Proportion
Zinc Sulphate Heptahydrate	7446-20-0	100%

Section 4: First Aid Measures:



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Description of necessary first Aid measures:

Swallowed: Rinse mouth out with water. Give plenty of water to drink. DO **NOT** induce vomiting. If symptoms persist, contact a doctor.

Skin: Remove contaminated clothing. Wash affected area with non-abrasive soap and plenty of water. If irritation persists, contact a doctor.

Eye: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a poison centre or doctor / physician.

Inhaled: Remove victim from exposure to fresh air. If rapid recovery does not occur, consult a doctor.

Notes for Medical Personnel: No medical information available on medical conditions which are aggravated from exposure to this product.

Section 5: Fire Fighting Measures

Type of Hazard: Product is a non-flammable solid.

Fire Hazard Properties: No particular fire hazard properties.

Extinguishing Media & Methods: In case of fire, use appropriate extinguishing 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.

Section 6: Accidental Release Methods

Emergency Procedures: Personnel involved in the clean up should wear full protective clothing. Eliminate all sources of ignition. Increase ventilation. Stop leaks if safe to do so. Avoid generating dust. DO NOT let product reach drains or waterways. If product does enter a waterway, advise local and regional authorities.

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 dry, suitable labelled container and hold for safe disposal. Once pick-up is complete, flush spill site with plenty of water to eliminate any residue. Hold contaminated water for treatment.

Section 7: Handling and Storage

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

Store Site Requirements: Store in a cool dry well ventilated area. Keep containers tightly closed when not in use. Insect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from sources of ignition. Protect from direct sunlight and moisture. This product is not classified as dangerous for transport.

Packaging: Store in original labelled packaging as approved by manufacturer.

Section 8: Exposure Controls / Personal Protection

Workplace Exposure Standards: No exposure standard is established by ERMA NZ. The exposure standard for dust not otherwise specified is 10mg/m³ (for inspirable dust) and 3mg/m³ for respirable dust.

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):

Respirator: Wear an effective dust mask if there is a significant chance that dusts are likely



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to build up.

Eyes: Safety glasses with side shields approved to EN166.

Hands: Wear impervious gloves.

Clothing: Wear chemical resistant overalls and safety footwear.

General hygiene: Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling.

Section 9: Physical and Chemical Properties

Required Specifications:

Physical State: Solid.

Appearance: White to slightly yellow crystalline solid.

Melting Point: Decomposes at 100°C.

Vapour Pressure: N/A.

Specific Gravity: N/A.

Flash Point: N/A.

Flammability Limits: N/A.

Solubility in Water: 58gm/100ml (25°C).

Specific Gravity: 1.97 (Water = 1).

Section 10: Stability and Reactivity

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

Conditions to avoid: Avoid excessive heat, dusty conditions, static discharges, moisture and high temperatures.

Material to avoid: Incompatible with sources of ignition.

Hazardous decomposition Products: Product may emit water and anhydrous zinc sulphate.

Hazardous polymerization: Does not occur.

Section 11: Toxicological Information

In general, zinc is considered to be a low toxicity metal. Zinc is a very important trace element for humans. It is an important component of many enzymes and other proteins and has an essential role in many processes of normal growth and development. For zinc compounds, including zinc sulphate, a number of reversible harmful effects (red and white blood cell deficiencies (anaemia and leukopenia), headache, stomach symptoms and copper deficiency) can result from long-term ingestion, based on non-occupational human reports and animal information. Zinc can accumulate in the body. Intestinal absorption of zinc can vary widely following oral administration (in animals ranges of <10 to >90% are reported) and is influenced by age and a number of dietary factors. Zinc is stored mainly in the muscle and bone, and also in the prostate, liver, gastro-intestinal tract, kidneys, skin, lung, brain, heart and pancreas. In humans ingesting normal amounts of zinc, the reported half-lives were from 100-500 days. The body regulates the amount of zinc stored by decreasing absorption and increasing excretion (mainly via faeces) when intake increases.

Acute Effects:

Swallowed: Ingestion of this product may cause headache and gastric disturbance such as nausea and vomiting. Zinc sulphate is an emetic (cause vomiting). Ingestion of large doses may cause



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anaemia and stomach symptoms with abdominal pain, diarrhoea and in severe cases, vomiting of blood.

Skin: Product is a skin irritant. Causes itchiness and reddening of contacted skin.

Eye: Product is an eye irritant. Causes stinging and reddening of eyes and watering may become copious. Lengthy exposure or delayed treatment may cause permanent damage.

Inhaled: Long term inhalation of high amounts of any nuisance dust may overload lung clearance mechanism.

Section 12: Ecological Information

Potential Environmental Considerations: Avoid contaminating waterways, drains and sewers.

Data organisation:

Oncorhynchus mykiss Rainbow trout,donaldson trout

LC50 = T 103 ug/l

FW 96 h; flow-through

Reference Number: 46945 Author(s): Alsop, D.H., and C.M. Wood Publication Year: 1999 Title:

Influence of Waterborne Cations on Zinc Uptake and Toxicity in Rainbow Trout, Oncorhynchus mykiss

Reference Source: Can.J.Fish.Aquat.Sci. 56(11):2112-2119 [ECOTOX]

In a similar study (Sanders, 2001b) with zinc sulphate heptahydrate (pharmaceutical grade), two out of six rats died at an oral dose of 2000 mg/kg bw (0/3 in first sex tested, 2/3 in second sex tested).

Clinical signs were hunched posture, lethargy, ataxia, pilo-erection, splayed or tiptoe gait, decreased respiration rate, laboured respiration, ptosis, emaciation, red/bron staining round eyes and diarrhoea.

Necropsy in animals that died revealed haemorrhagic lungs, dark liver and kidneys, white/green coloured and thickened gastric mucosa and haemorrhagic small intestine. At 200 mg/kg bw no death or clinical signs were observed.). According to OECD 423 the results for zinc sulphate heptahydrate (pharmaceutical grade) lead to an expected LD50 between 1000 and 2000 mg/kg bw.

EU Risk Assessment for Zinc Sulfate. Final draft of May 2003 [ECB]

Environmental risk phrases: Avoid release to the environment. Collect spillage.

Section 13: Disposal Considerations

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

Section 14: Transport Information

Land and Sea Transport

UN Number: Not applicable

Shipping Name: ZINC SULPHATE HEPTAHYDRATE

Dangerous Goods Class: Not applicable

Subsidiary Risk: Not applicable.

Pack Group: Not applicable.

Precaution for User: IRRITANT

Hazchem Code: N/A

Section 15: Regulatory Information

Regulatory status:

AICS Name: SULPHURIC ACID, ZINC SALT (1:1), HEPTAHYDRATE



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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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