

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY:

HEADLAND EMPEROR

SUPPLIER NAME: Zelam Limited
MANUFACTURER: Headland Agrochemicals Ltd
SUPPLIER ADDRESS: Hudson Road, Bell Block, New Plymouth, New Zealand
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EMERGENCY PHONE: 0800 243 622, 0800 CHEMCALL INTERNATIONAL EMERGENCY PH: +64 3 353 0199
CHEMICAL FAMILY: USE: Micronutrient fertiliser

2. COMPOSITION / INFORMATION ON INGREDIENTS:

| COMMON NAME: | CAS NUMBER: | CONCENTRATION %: | HAZARD CLASSIFICATIONS: |
|----------------|-------------|------------------|-------------------------|
| Copper Nitrate | 3251-23-8 | 30 - 40 | |

3. HAZARDS IDENTIFICATION:

Harmful - may be fatal if swallowed, inhaled or absorbed through the skin.
Danger - this product is corrosive to the skin and may cause burns.
Danger - this product is corrosive and may cause eye damage.
Toxic - may cause respiratory sensitization. Avoid inhalation of vapours/dust/mist.
Harmful - may cause reproductive/development damage from repeated oral exposure.
Toxic - may cause organ damage from repeated oral exposure at high doses.
Very toxic to fish/aquatic organisms with long-lasting effects. Avoid contamination of any water supply with product or empty container.
Toxic to terrestrial vertebrates [birds]

Refer to Section 15 for NZ EPA Requirements.

4. FIRST - AID MEASURES:

EYE CONTACT: Flush affected eyes with flowing water for at least 15 minutes. Get prompt medical attention. Corneal burns may occur.
SKIN CONTACT: Wash with plenty of soap and flowing water for at least 15 minutes while removing contaminated clothing. DO NOT scrub skin. Seek medical attention if irritation persists. Wash clothing before reuse.
INHALATION: Avoid inhalation of spray or mists which are likely to be highly irritating. Remove to a source of fresh air and seek medical advice.
INGESTION: If swallowed, rinse mouth with water immediately. DO NOT induce vomiting. Seek medical attention.
NOTES TO DOCTOR: Ingestion may irritate digestive tract. Avoid lung aspiration. Treat symptomatically

5. FIRE FIGHTING MEASURES:

FLASHPOINT: Not applicable HAZCHEM Code: 2 X
FLAMMABLE LIMITS: Not available
EXTINGUISHING MEDIA: Dry chemical, foam, water spray (fog) or carbon dioxide.
THERMAL DECOMPOSITION PRODUCTS: Vapours may be toxic and corrosive. Self contained breathing apparatus required.
SPECIAL FIRE FIGHTING METHODS: Do not allow contaminated run-off to enter drains.
UNUSUAL FIRE OR EXPLOSION HAZARDS:

6. ACCIDENTAL RELEASE MEASURES:

Use appropriate personal protective equipment such as gloves protective eye glasses and impervious vinyl or tyvec outer clothing. Spills may be slippery and should be cleaned up immediately. Clear area of unnecessary personnel. Use appropriate protective equipment. Large spill: Dike and pump as much as possible to a salvage container. Absorb the remaining liquid and any small spills with clay granules, sand or other absorbent material and sweep to a waste container. Cover the spill area with water and absorb. Minimise runoff into waterways or drains.

7. HANDLING AND STORAGE:

Harmful - Keep out of reach of children.
Store in original container, tightly closed under lock and key, away from food, food related materials, animal feedstuffs, seed or fertilizer. Chemical resistant gloves and eye protection should be worn when handling this product. Recommended to have a source of fresh water available for flushing skin and eyes.
Wear other protective equipment appropriate to the situation when handling product. Wash protective clothing daily after work.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION:

EXPOSURE LIMITS: No exposure limits (WES, TEL, or EELs) have been specifically assigned for this product.
EYE PROTECTION: Avoid contact with eyes. Wear a face shield or full chemical workers goggles when there is a risk of a splash. Corneal burns may occur.
RESPIRATORY PROTECTION: Avoid breathing in mist or aerosol from the product. Use an appropriate respirator if exposed to the mist or aerosol from the product.
PROTECTIVE CLOTHING: Avoid skin contact, blistering may occur. If skin contact or contamination of clothing is likely, protective clothing [impervious gloves, waterproof hat, coat, trousers and boots] should be worn. Wash protective clothing daily after work.
VENTILATION: General (mechanical) room ventilation is considered satisfactory.
HYGIENE PRECAUTIONS: Do not eat drink or smoke while working with this product. Remove clothing that becomes soaked or contaminated and wash before reuse. Wash hands before breaks and after work. The use of a skin barrier cream is useful to give additional skin protection.

9. PHYSICAL AND CHEMICAL PROPERTIES:

| | | | |
|--|------------------|--------------------|----------------|
| APPEARANCE / STATE / ODOUR: | Blue liquid | pH: | < 2 |
| BOILING POINT: | Not available | SETTING POINT: | Not available |
| DENSITY: | 1.33 - 1.35 | AUTOIGNITION TEMP: | Not applicable |
| DECOMPOSITION TEMP: | Not available | VAPOUR DENSITY: | Not available |
| FLASHPOINT: | Not applicable | VAPOUR PRESSURE: | Not available |
| EXPLOSION PROPERTIES: | Not available | | |
| SOLUBILITY: | Soluble in water | | |
| OTHER DATA: | | | |
| OCTANOL / WATER PARTITION COEFFICIENT: | Not available | | |

10. STABILITY AND REACTIVITY:

CONDITIONS TO AVOID: Product is stable under normal temperatures and pressures. Manganese nitrate is an oxidising agent when dry.
MATERIALS TO AVOID: Strong oxidising agents. Strong bases.
HAZARDOUS DECOMPOSITION PRODUCTS: In combustion emits toxic, corrosive fumes.

11. TOXICOLOGICAL INFORMATION:

ACUTE ORAL: No data
ACUTE DERMAL: No data
ACUTE INHALATION: No data
OTHER TOXICITY INFORMATION: 6.1D; Harmful - may be fatal if swallowed, inhaled or absorbed through the skin.
8.2C; Danger - this product is corrosive to the skin and may cause burns.
8.3A; Danger - this product is corrosive and may cause eye damage.
6.5A; Toxic - may cause respiratory sensitization. Avoid inhalation of vapours/dust/mist.
6.8B; Harmful - may cause reproductive/development damage from repeated oral exposure.
6.9A; Toxic - may cause organ damage from repeated oral exposure at high doses.

12. ECOLOGICAL INFORMATION:

9.1A; Very toxic to fish/aquatic organisms with long-lasting effects. Avoid contamination of any water supply with product or empty container.
9.3B; Toxic to terrestrial vertebrates [birds]

The product is expected to biodegrade in the environment. Bio-accumulation is considered unlikely.

13. DISPOSAL CONSIDERATIONS:

Triple rinse empty container and add rinsate to the spray tank. If recycling, discard cap and deliver clean container to an Agrecovery depot. Alternatively crush and bury in a suitable landfill.
Dispose of product only by using according to this label, or at an approved disposal facility.
Avoid contamination of any water supply or stream with product or empty container.

14. TRANSPORT INFORMATION:

| | | | |
|-------------------------|--------------------------|------------------|-----|
| Proper Shipping Name: | CORROSIVE LIQUID, N.O.S. | UN Hazard Class: | 8 |
| UN Number: | 1760 | Packing Group: | III |
| Hazchem Code: | 2X | | |
| Additional Information: | Contains Copper Nitrate | | |

Do not carry more than 0.5 L of this product on a passenger service vehicle.

15. REGULATORY INFORMATION:

APPROVED HANDLER: The product must be under the personal control of an approved handler when:

- the product is applied in a wide dispersive manner; or
- used by a commercial contractor.

However, it may be handled by a person who is not an approved handler if:

- an approved handler is present at the facility where the substance is being handled; and
- the approved handler has provided guidance to the person in respect to the handling of the product; and
- the approved handler is available at all times to provide assistance if necessary.

This product shall NOT be applied onto or into water.

RECORD KEEPING: A written record of each application or discharge must be kept where -

- members of the public may lawfully be present; or
- the substance is likely to enter the air or water supply and leave the area where it is under control.

The information must be kept for a minimum of three [3] years.

NZ EPA Approval Code: Fertilisers (Corrosive) HSR002569
See the NZ EPA Website for more details: www.epa.govt.nz

16. OTHER INFORMATION:

The data given here is based on current knowledge and experience. The purpose of this safety data sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the product's properties.