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

PRODUCT NAME: **COBRA**
 MANUFACTURER: Lonza NZ Ltd
 SUPPLIER NAME: Lonza NZ Ltd
 SUPPLIER ADDRESS: 13-15 Hudson Rd, Bell Block, New Plymouth, New Zealand
 SUPPLIER PHONE: +64 6 7559234 SUPPLIER FAX: +64 6 7551174
 EMERGENCY PHONE: 0800 243 622, 0800 CHEMCALL INTERNATIONAL EMERGENCY PHONE: +64 4 917 9888
 CHEMICAL FAMILY: Nitrile / Morpholine USE: Fungicide

2. HAZARDS IDENTIFICATION:

6.1B: Toxic - may be fatal if swallowed, inhaled or absorbed through the skin.
 8.3A: Danger - this product is corrosive and may cause eye damage. Avoid contact with eyes.
 6.3B: Harmful - may cause skin irritation. Avoid contact with skin.
 6.5B: Harmful - may cause skin sensitisation from prolonged skin contact. Avoid skin contact.
 6.7B: Harmful - suspected of causing cancer.
 6.9A: Toxic - may cause organ damage from repeated oral exposure at high doses.
 9.1A: Very toxic to fish with long-lasting effects.
 9.2B: Toxic to the soil environment.
 9.3B: Toxic to terrestrial vertebrates [birds].
 Refer to Section 15 for NZ EPA Requirements.

3. COMPOSITION / INFORMATION ON INGREDIENTS:

COMMON NAME:	CAS NUMBER:	CONCENTRATION %:	HAZARD CLASSIFICATIONS:
Chlorothalonil	1897-45-6	45%	6.1, 8, 9
Dimethomorph	110488-70-5	9%	6.1, 9.
Proprietary surfactants		Balance	

4. FIRST - AID MEASURES:

EYE CONTACT: Immediately flush with flowing water for at least 15 minutes. Seek medical attention if irritation persists.
 SKIN CONTACT: Immediately flush with plenty of water while removing contaminated clothing. DO NOT scrub the skin. Continue for at least 15 minutes. Wash clothing before reuse.
 INHALATION: If inhaled, move the victim to fresh air immediately. Begin artificial respiration if breathing has stopped. Obtain medical attention.
 INGESTION: If swallowed, rinse mouth with water immediately. DO NOT induce vomiting. Seek medical attention.
 NOTES TO DOCTOR: No specific antidote. Treat symptomatically. Antihistamines or steroid cream have been effective in treatment of skin.

5. FIRE FIGHTING MEASURES:

FLASHPOINT: Non flammable. HAZCHEM CODE: 2X
 FLAMMABLE LIMITS: Not applicable.
 EXTINGUISHING MEDIA: Water spray (fog), foam.
 THERMAL DECOMPOSITION PRODUCTS: Include hydrogen chloride and oxides of carbon and nitrogen.
 SPECIAL FIRE FIGHTING METHODS: Addition of water may cause excessive foaming. Vapours may be toxic. Self contained breathing apparatus required. Do not allow contaminated runoff to enter drains.
 UNUSUAL FIRE OR EXPLOSION HAZARDS: None.

6. ACCIDENTAL RELEASE MEASURES:

Use appropriate protective equipment. Clear area of unnecessary personnel. Spills may be slippery and should be cleaned up immediately.
 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 drains or waterways. Warning this substance is very toxic to fish. Avoid contamination of any water supply.

7. HANDLING AND STORAGE:

Toxic - Keep out of reach of children.
 Store in original container, tightly closed under lock and key, away from food stuffs.
 Eye protection and impervious gloves should be worn at all times when handling product. Wear other personal 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 or TEL) have been specifically assigned for this product.
 EEL set for Chlorothalonil [CAS 1897-45-6] - EELwater = 0.53 µg/L; EELsoil = 0.01 mg/kg soil
 EEL set for Dimethomorph [CAS 110488-70-5] - EELwater = 0.1 µg/L; EELsoil = 1 µg/kg soil
 EYE PROTECTION: Avoid contact with eyes. Wear a full eye protection when there is a risk of a splash.
 A SOURCE OF FRESH, CLEAN WATER FOR FLUSHING EYES MUST BE AVAILABLE IN THE TREATED AREA FOR SEVEN [7] DAYS FOLLOWING APPLICATION OF THE PRODUCT TO PLANTS.
 Workers must be informed, in a manner that they can understand, that residues in the treated area are highly irritating to their eyes, that they should take precautions to keep the residue out of their eyes [such as refraining from rubbing their eyes], and that if they do get residues in their eyes, they should immediately flush their eyes with fresh, clean water.
 The workers must also have instructions on how to operate an eyeflush container if a specialised eyewash facility has been provided.
 RESPIRATORY PROTECTION: Avoid breathing in vapours or aerosol from the product. Use an appropriate respirator if exposed to the vapours or aerosol from the product.
 PROTECTIVE CLOTHING: Wear protective clothing such as impervious gloves, waterproof hat, coat and trousers (worn outside rubber boots) when using. Wash protective clothing daily after work.
 VENTILATION: General (mechanical) room ventilation is considered satisfactory.

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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: Off-white to cream aqueous suspension concentrate.
 BOILING POINT: 100°C. pH: 7.0.
 DENSITY: 1.245. SETTING POINT: less than 0°C.
 DECOMPOSITION TEMP: Not available. AUTOIGNITION TEMP: Not applicable.
 FLASHPOINT: Not applicable. VAPOUR DENSITY: Not available.
 EXPLOSION PROPERTIES: Not applicable. VAPOUR PRESSURE: 0.076 mPa 25°C chlorothalonil
 SOLUBILITY: 0.81 mg/L water 25°C chlorothalonil. 49.2 mg/L @25°C dimethomorph.
 OTHER DATA:
 OCTANOL / WATER PARTITION COEFFICIENT: Kow Log P 2.92 25°C chlorothalonil, Kow Log P 2.7 dimethomorph.

10. STABILITY AND REACTIVITY:

CONDITIONS TO AVOID: None.
 MATERIALS TO AVOID: Stable.
 HAZARDOUS DECOMPOSITION Include oxides of carbon, nitrogen, and hydrogen chloride.

11. TOXICOLOGICAL INFORMATION:

ACUTE ORAL: Low single dose toxicity. LD50 (male rat) 10 000 mg/kg. [By calculation]
 ACUTE DERMAL: LD50 (dermal) > 10 000 mg/kr (rabbit). Not likely to be absorbed in acutely toxic amounts.
 ACUTE INHALATION: May cause irritation to respiratory tract.
 OTHER TOXICITY INFORMATION:
 Toxic - may be fatal if swallowed, inhaled or absorbed through the skin.
 Danger - this product is corrosive and may cause eye damage. Avoid contact with eyes.
 May cause skin irritation and skin sensitisation from prolonged skin contact. Avoid contact with skin.
 Suspected of causing cancer and may cause organ damage from repeated oral exposure at high doses.
 Target organs - kidney and liver.

12. ECOLOGICAL INFORMATION:

Aquatic Toxicity: Very toxic to fish. LC50 (96hr) rainbow trout - 0.1 mg/L. [By calculation]
 Soil Toxicity: Toxic to soil environment.. Terrestrial Vertebrates - Birds: Toxic to birds. Terrestrial Invertebrates - Bees: Not toxic to bees.
 Very toxic to fish with long-lasting effects. Avoid contamination of any water supply with product or empty container.
 Toxic to the soil environment.
 Toxic to terrestrial vertebrates [birds]

13. DISPOSAL CONSIDERATIONS:

Dispose of this product only by using according to the label. Triple rinse container and add rinsate to spray tank. Crush or puncture cleaned, empty containers and dispose of container at an approved landfill or Agrecovery Depot. Avoid contamination of any water supply or stream with this product or empty container.

14. TRANSPORT INFORMATION:

Proper Shipping Name: PESTICIDE LIQUID, TOXIC, N.O.S. (Chlorothalonil and Dimethomorph)
 UN Number: 2902 UN Hazard Class: 6.1
 Packing Group: III Hazchem Code: 2X
 Additional Information: Do not carry more than 0.1 L of this product on a passenger service vehicle

15. REGULATORY INFORMATION:

APPROVED HANDLER; This product must be under the personal control of an approved handler at all times or it must be locked up. However if an approved handler is present at the facility where the substance is being handled, or the approved handler has provided guidance to the person in respect to the handling of the product and is present at all times a non approved handler may handle the product.

The application rate for Cobra is 2 L Cobra/ha every 10 -14 days, with no more than four [4] applications per season.

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 and leave the area. The information must be kept for a minimum of three years.

This product DOES NOT have Tracking Requirements.
 Approved pursuant to the HSNO Act 1996. NZ EPA Approval Code: HSR001672 See <www.epa.govt.nz> for controls.
 Registered pursuant to the ACVM Act 1997. ACVM Pesticide No: P007351 See <www.nzfsa.govt.nz> for registration conditions.

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.