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

PRODUCT NAME: **GREENSEALS PYRETHRUM**
MANUFACTURER: Lonza NZ Ltd
SUPPLIER NAME: Lonza NZ Ltd
SUPPLIER ADDRESS: 13-15 Hudson Rd, Bell Block, New Plymouth, New Zealand
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CHEMICAL FAMILY: Pyrethroid. USE: Insecticide

2. HAZARDS IDENTIFICATION:

3.1D: Warning Combustible Liquid.
6.1E: Harmful - may be harmful if swallowed, inhaled or absorbed through the skin.
6.3B: Harmful - may cause skin irritation. Avoid contact with skin.
6.4A: Harmful - may cause eye irritation. Avoid contact with eyes.
6.5A: Toxic - may cause respiratory sensitization. Avoid inhalation of vapours/mist.
6.5B: Harmful - may cause skin sensitization from prolonged skin contact. Avoid skin contact.
6.9B: Harmful - may cause organ damage from repeated oral exposure at high doses.
9.1A: Very toxic to fish with long-lasting effects.
9.4A: Very Toxic to terrestrial invertebrates [bees].
Refer to Section 15 for NZ EPA Requirements.

3. COMPOSITION / INFORMATION ON INGREDIENTS:

COMMON NAME:	CAS NUMBER:	CONCENTRATION %:	HAZARD CLASSIFICATIONS:
Petroleum solvent	68442-69-3	> 60%	Class 3.
Piperonyl Butoxide	51-03-6	7%	Class 6, 9.
Pyrethrum 50%	8003-34-7	< 3%	Class 6, 9.
Inerts		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: Wash with plenty of soap and flowing water for at least 15 minutes while removing contaminated clothing. DO NOT scrub skin. Wash clothing before reuse.
INHALATION: If inhaled, move the victim to fresh air immediately. Begin artificial respiration if breathing has stopped. Use mouth to nose rather than mouth to mouth. Obtain medical attention.
INGESTION: If swallowed, rinse mouth with water immediately. DO NOT induce vomiting. Seek medical attention.
NOTES TO DOCTOR: Treat symptomatically. No specific antidote.

5. FIRE FIGHTING MEASURES:

FLASHPOINT: > 61 °C. HAZCHEM CODE: 2X
FLAMMABLE LIMITS: Not determined
EXTINGUISHING MEDIA: Foam, Carbon dioxide, Dry chemical or Water spray (fog).
THERMAL DECOMPOSITION PRODUCTS: Vapours may be toxic.
SPECIAL FIRE FIGHTING METHODS: Foam, Carbon dioxide, Dry chemical or Water spray (fog). 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. Extinguish any sources of ignition. 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 waterways or drains. Warning this substance is very toxic to aquatic organisms. Avoid contamination of any water supply with this substance or empty container.

7. HANDLING AND STORAGE:

Harmful - Keep out of reach of children.
Store in original container in a cool, well ventilated place, away from direct sunlight and extreme heat. Keep container tightly closed, away from food, food related materials, animal feedstuffs, seed or fertilizer.
Wear eye protection. Impervious gloves should be worn at all times. Wash protective clothing daily after work.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION:

EXPOSURE LIMITS: No exposure limits (TEL, or EELs) have been specifically assigned for this product.
WES set for Pyrethrum [CAS 8003-34-7] - 8h TWA : 5 mg/m³
EYE PROTECTION: Chemical goggles or face shield where splash may occur. Avoid contact with eyes.
RESPIRATORY PROTECTION: Not normally required. Exceptions: in the case of fire or during the formation of mists or aerosols.
PROTECTIVE CLOTHING: Chemical resistant gloves should be worn when handling this product. Avoid skin contact.
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.

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9. PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE / STATE / ODOUR: Clear yellow liquid.
 BOILING POINT: 170 °C. pH: 7.
 DENSITY: 0.815 SETTING POINT: Not available.
 DECOMPOSITION TEMP: Not available. AUTOIGNITION TEMP: Not available.
 FLASHPOINT: >61 °C. VAPOUR DENSITY: Not available.
 EXPLOSION PROPERTIES: Not available. VAPOUR PRESSURE: Not available.
 SOLUBILITY: Emulsifies in water
 OTHER DATA:
 OCTANOL / WATER PARTITION COEFFICIENT: Kow logP = 5.90 at 20°C [Pyrethrum 1]

10. STABILITY AND REACTIVITY:

CONDITIONS TO AVOID: Extreme heat.
 MATERIALS TO AVOID: Oxidising agents
 HAZARDOUS DECOMPOSITION Thermal decomposition may release ammonia, carbon monoxide and carbon dioxide and oxides of nitrogen.

11. TOXICOLOGICAL INFORMATION:

ACUTE ORAL: LD50 Rat >1500 mg/kg. [Pyrethrum tech].
 ACUTE DERMAL: LD50 Rat > 1500 mg/kg. Rabbit 5000 mg/kg. [Pyrethrum tech].
 ACUTE INHALATION: LD50 (4hr) for rats 3.4 mg/L. [Pyrethrum tech].
 OTHER TOXICITY INFORMATION:
 May be harmful if swallowed, inhaled or absorbed through the skin.
 May cause skin and eye irritation and cause respiratory sensitization. Avoid contact with skin or eyes and avoid inhalation of vapours/mist.
 May cause skin sensitization from prolonged skin contact and organ damage from repeated oral exposure at high doses.
 In mammals pyrethrum is rapidly degraded in the stomach to form harmless metabolites.

12. ECOLOGICAL INFORMATION:

Aquatic Toxicity: Very toxic to fish. LC50 rainbow trout 5.2 micrograms / L.
 Terrestrial Invertebrates - Bees: Very toxic to bees. Contact: LD50 22 nanograms / bee.
 Very toxic to fish with long-lasting effects. Avoid contamination of any water supply with product or empty container.
 Very Toxic to terrestrial invertebrates [bees].
 Spray must not be applied to plants in flower, or are likely to flower within 7days, if they are likely to be visited by bees.

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 approved 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: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (Pyrethrum)
 UN Number: 3082 UN Hazard Class: 9
 Packing Group: III Hazchem Code: 2X
 Additional Information: Do not carry more than 1 L of this product on a passenger service vehicle.
 This product requires segregation from certain other Classes of Dangerous Goods. Check LTSA DG Rule 45001 for additional information.

15. REGULATORY INFORMATION:

APPROVED HANDLER: The product must be under the personal control of an approved handler when:
 a) the product is applied in a wide dispersive manner; or b) 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.

Greenseals Pyrethrum shall NOT be applied onto or into water.
 This product must not be applied to plants in flower, or are likely to flower within 7 days, if they are likely to be visited by bees.

RECORD KEEPING: A written record of use is required if 3 kg or more of this product is used within 24 hours in a place where:
 a) public may lawfully be present; or b) the substance is likely to enter air or water supply and leave the place where it is under control.
 The information must be kept for a minimum of three [3] years.

This product DOES NOT have Tracking Requirements.
 Approved pursuant to the HSNO Act 1996. NZ EPA Approval Code: HSR000301 See <www.epa.govt.nz> for controls.
 Registered pursuant to the ACVM Act 1997. ACVM Pesticide No: P005417 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 products' properties.