

Infosafe No™ 3NUU1	Issue Date : April 2020	ISSUED by NUFARM
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 Product Name **ENDGAME™**

1. Identification

GHS Product Identifier	ENDGAME™
Product Code	03525
Product Type	Insecticide
Company Name	Nufarm NZ
Address	6 Manu Street, Otahuhu Auckland 2024 New Zealand
Telephone/Fax Number	Tel: 0-9-270 4150
Emergency phone number	0800 651 911
Email	info@nz.nufarm.com
Recommended use of the chemical and restrictions on use	For the control of aphids on lettuce, potatoes, tamarillos, tomatoes, vegetable brassicas and green peach aphid on peaches and nectarines and whitefly on tamarillos and tomatoes.
Other Information	This SDS describes, to the best of our knowledge, the properties of the concentrated product. The physical properties and some of the assessments do not apply to the properties of the product once it has been diluted for application. Acute health effects of the diluted product are likely to be much less severe.

2. Hazard Identification

Other Information	6.9B target organ toxicant, 9.1C aquatic toxicant TOXICITY Harmful-may cause reproductive/development damage from repeated oral exposure. ECOTOXIC Harmful to aquatic organisms with long-lasting effects.
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3. Composition/information on ingredients

Chemical Characterization	Solid		
Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	Pymetrozine	123312-89-0	500 g/kg
	Other ingredients (non-hazardous)		Balance

4. First-aid measures

First Aid Measures	For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor immediately. Begin artificial respiration if the victim is not breathing. Use mouth-to-nose rather than mouth-to-mouth. Obtain medical attention.
Inhalation	Remove patient to fresh air. Lay down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear and apply resuscitation. Seek medical assistance immediately.
Ingestion	Never give anything by mouth to an unconscious person. If swallowed do NOT induce vomiting. For advice, contact the National Poisons Centre (0800 764 766). Seek medical assistance immediately.
Skin	Immediately flush body and clothes with large amounts of water. Remove contaminated clothing and footwear. Wash affected areas with soap and water. If a large area is affected seek medical assistance.
Eye contact	Flush eyes with plenty of water for 15 minutes holding eyelids open if necessary. Remove contact lenses, if present and easy to do. Seek medical assistance even if there are no immediate symptoms.
First Aid Facilities	Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.
Advice to Doctor	Treat symptomatically.

5. Fire-fighting measures

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Suitable extinguishing media	Water fog, foam, carbon dioxide or dry chemical.
Hazards from Combustion	Avoid strong water jets-airborne dusts may form a flammable dust cloud. May emit toxic smoke and fumes if involved in fires or exposed to extreme heat.
Products	
Special Protective Equipment for fire fighters	Full protective clothing and self contained breathing apparatus.
Specific Methods	Keep Up wind. Do not allow washings to reach sewage or effluent systems.
Other Information	STOP FIRE WATER FROM ENTERING DRAINS OR WATER BODIES. Location Certificate: Not applicable Hazardous Atmosphere Zone: Not applicable Number of Fire Extinguishers: Not applicable

6. Accidental release measures

Spills & Disposal	Wear protective clothing. Clear area of unprotected personnel. Sweep up solids without generating dust (use water to dampen). If spill does enter waterways contact the local authority. Collect in an appropriate sealable container for disposal in an approved landfill.
Personal Protection	For appropriate personal protective equipment (PPE), refer Section 8.
Environmental Precautions	Prevent from entering drains, waterways or sewers.

7. Handling and storage

Precautions for Safe Handling	Avoid skin and eye contact and inhalation of dust. APPROVED HANDLER: Not applicable TRACKING: Is not required. RECORD KEEPING: Not applicable Do not apply onto or into water.
Conditions for safe storage, including any incompatibilities	Keep out of reach of children. Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs, fertilisers and seeds. Storage must be in accordance with NZS8409 Management of Agrichemicals. Stores containing 1000kg of ENDGAME are subject to signage, and more than 1000kg require emergency response plans.
Other Information	Always read the label and any attached leaflet before use. Aggregate Storage Volume Thresholds: When stored with substances of the same hazard classification the aggregate quantity must be considered. For full details refer to the current NZS8409 Management of Agrichemicals and the HSNO Regulations.

8. Exposure controls/personal protection

Occupational exposure limit values	No exposure limits (WES, TEL or EEL's) have been specifically assigned for this product.
Appropriate engineering controls	Handle in well ventilated areas, generally natural ventilation is adequate.
Personal Protective Equipment	When opening the container, preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length impervious gloves and face shield or goggles.
Hygiene Measures	After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash contaminated clothing and safety equipment.

9. Physical and chemical properties

Form	Solid
Appearance	Light brown cylindrical granules.
Melting Point	217°C (Pymetrozine)
Solubility in Water	Disperses in water = 0.29 g/L (pH 6.5, 25°C)
pH	6.5-8.5 (1% aqueous solution)
Vapour Pressure	0.004 mPa for pymetrozine

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Partition Coefficient: Kow Log P is -0.18 (pymetrozine)
n-octanol/water
Other Information (WG) Water dispersible granules.

10. Stability and reactivity

Chemical Stability Stable under normal conditions of handling and storage.
Possibility of hazardous reactions Keep away from strong oxidising agents.
Hazardous Polymerization Hazardous polymerisation is not possible.

11. Toxicological Information

Toxicology Information No harmful effects are expected if the precautions on the label and this SDS are followed.

Acute Toxicity - Oral LD50 (rat) > 5000 mg/kg for Pymetrozine

Acute Toxicity - Dermal LD50 (rat) > 2000 mg/kg for Pymetrozine

Acute Toxicity - Inhalation LC50 (4h) for rats > 1800 mg/m³ air for Pymetrozine

Ingestion The concentrate is of low toxicity if swallowed.

Inhalation May cause irritation to mucous membranes.

Skin May irritate the skin.

Eye The concentrate may cause irritation of the eyes.

Skin Sensitisation Product is not a skin sensitiser.

Chronic Effects Target organ toxicant: Reproductive system

Serious eye damage/irritation Mild eye irritant.

Skin corrosion/irritation Mild skin irritant.

Other Information The Australian Acceptable Daily Intake (ADI) for pymetrozine for a human is 0.006 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.57 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Aust Govt Dept. of Health, Office of Chemical Safety, 'ADI List', June 2014).

12. Ecological information

Persistence and degradability Half life in soil is typically 14 days.

Basis for Assessment Ecotoxicological data have not been determined specifically for this product. Data below is for active ingredient unless otherwise stated.

Acute Toxicity - Fish LC50 (96hr) for rainbow trout is > 100 mg/L

Acute Toxicity - Daphnia LC50 (48hr) for daphnia magna is 87 mg/L

Acute Toxicity - Algae LC50 (72h) Scenedesmus subspicatus is 47.1 mg/L

Acute Toxicity - Other Organisms
 Birds:
 LD50 mallard duck => 2000 mg/kg, LC50 bobwhite quail => 5200 ppm
 Bees:
 LD50 (48h) oral > 117 µg/bee; contact > 200 µg/bee
 Worms:
 LC50 (14d) Eisenia foetida 1098 mg/kg soil

13. Disposal considerations

Product Disposal Dispose of product only by using according to label, or at an approved landfill. Do not burn.

Container Disposal Triple rinse empty container and add rinsate to spray tank. Recycle empty container. Otherwise crush and bury in a suitable landfill.

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14. Transport information

Transport Information	It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.
Other Information	Segregation: Check the latest Land Transport Rule Dangerous Goods Rule 45001 for additional information. Sea transport may require additional segregation. Refer NZS5433 sea segregation for details.

15. Regulatory information

National and or International Regulatory Information	Registered pursuant to the ACVM Act 1997, No P9086 See www.foodsafety.govt.nz for registration conditions. Approved pursuant to the HSNO Act 1996, Approval code HSR000412. See www.epa.govt.nz for approval controls.
Packaging & Labelling	ECOTOXIC
Hazard Rating	NFPA/HMIS: 1-1-1
Hazard Category	Harmful

16. Other Information

Date of preparation or last revision of SDS	April 2015
Contact Person/Point	IN AN EMERGENCY, DIAL 111 - FIRE OR POLICE 24Hr Tollfree Emergency No: 0800 651 911 24Hr Emergency No: National Poisons Centre Phone: 0800 764 766
Revisions Highlighted	5 Yearly review carried out.
	...End Of MSDS...

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