

Infosafe No™ 3NUJ2	Issue Date : March 2024	ISSUED by NUFARMNZ
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 Product Name **ADMIRAL®**

Section 1 - Identification

Product Identifier	ADMIRAL®
Product Code	02017
Product Type	Insect Growth Regulator
Company Name	Nufarm NZ
Address	Central Park, Building 3, Level 4, 666 Great South Road Ellerslie Auckland 1051 New Zealand
Telephone/Fax Number	Tel: 0-9-270 4150
Emergency Phone Number	0800 651 911
Email	nzinfo@nufarm.com
Recommended uses and any restrictions on use or supply	A selective insect growth regulator for the control of whitefly on greenhouse tomatoes and greenhouse cucumbers.
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.

Section 2 - Hazard(s) Identification

GHS classification of the substance/mixture	Flammable liquids: Category 4 Aspiration hazard: Category 1 Skin corrosion/irritation: Category 2 Hazardous to the aquatic environment acute Category 1 Hazardous to the aquatic environment chronic Category 1
Signal Word (s)	DANGER
Hazard Statement (s)	H227 Combustible liquid H303 May be harmful if swallowed. H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H410 Very toxic to aquatic life with long lasting effects.
Precautionary Statement – General	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P103 Read label before use.
Pictogram (s)	Exclamation mark, Health hazard, Environment,



Precautionary Statement – Prevention	P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking. P264 Wash hands, gloves, goggles and contaminated clothing thoroughly after handling. P280 Wear protective gloves/protective clothing/eye protection/face protection.
Precautionary Statement – Response	P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P332+P313 If skin irritation occurs: Get medical advice/attention. P370+P378 In case of fire: Use water fog, foam, carbon dioxide or dry chemical for extinction. P312 Call a POISON CENTER or doctor/physician if you feel unwell. P331 Do NOT induce vomiting. P362 Take off contaminated clothing and wash before reuse. P391 Collect spillage.

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Precautionary Statement – Storage	P403+P235 Store in a well-ventilated place. Keep cool. P405 Store locked up.
Precautionary Statement – Disposal	P501 Dispose of contents/container only by using according to the label or at an approved landfill. Do not burn.

Section 3 - Composition and Information on Ingredients

Chemical Characterization	Liquid		
Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	Pyriproxyfen	95737-68-1	100 g/L
	Emery	112-62-9	<30%
	Ingredients determined to be non-hazardous	-	To volume
	Aromatic hydrocarbon solvent	64742-94-5	300-600g/L

Section 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	Flush eyes with plenty of water for 15 minutes holding eyelids open if necessary. Seek medical assistance.
First-aid Facilities	Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.
Advice to Doctor	Treat symptomatically. If ingested, probable mucosal damage may contraindicate the use of gastric lavage. This product contains a light hydrocarbon liquid; ingestion or subsequent vomiting can result in aspiration of this product, which can cause pneumonitis.

Section 5 - Firefighting Measures

Suitable Extinguishing Media	Water fog, foam, carbon dioxide or dry chemical.
Unsuitable Extinguishing Media	Do not use water in a jet.
Hazards from Combustion Products	On burning may emit fumes which are toxic and/or irritating. Normal combustion forms carbon dioxide, water vapour and may produce oxides of nitrogen. Incomplete combustion can produce carbon monoxide.
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. Keep containers cool with water spray.
Hazchem Code	2Z
Decomposition Temperature	Information is not available.
Other Information	Location Certificate: Not applicable Hazardous Atmosphere Zone: Not applicable Number of Fire Extinguishers: 2 for 500L or more

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Section 6 - Accidental Release Measures

Spills and Disposal Wear protective clothing. Clear area of unprotected personnel. Eliminate all ignition sources and naked lights. Use non-sparking utensils. Contain spill and absorb with sand, soil or absorbent granules. If spill does enter waterways contact the local authority. Collect in an appropriate sealable container for disposal in an approved landfill.
Prevent materials from coming into contact with Class 1, 2, 3.2, 4 or 5 substances.
Wash area with water and detergent and absorb with inert material. Dispose of waste safely in an approved landfill.

Personal Protection For appropriate personal protective equipment (PPE), refer Section 8.

Environmental Precautions Prevent from entering drains, waterways or sewers.

Section 7 - Handling and Storage

Precautions for Safe Handling Do not handle until all safety precautions have been read and understood. The person mixing or applying ADMIRAL must be a 'Qualified Contractor' or a 'Qualified Person'. The spray mixture may also be prepared by a 'Qualified Loader'. For more information refer to the Hazardous Substances Property Controls Notice 2017. It is the duty of the PCBU that a person who uses, handles, manufactures or stores a hazardous substance (including hazardous waste) is provided information, instruction and training in accordance with Regulation 4.5 of the Health and Safety at work (Hazardous Substances) Regulations 2017.
Avoid skin and eye contact and inhalation of spray mist.
This product may only be applied in greenhouses.
Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.
Do not apply directly onto or into water.
CERTIFIED HANDLER: Is not required
TRACKING: Is not required.
RECORD KEEPING: Records of use as described in NZS 8409 Management of Agrichemicals must be kept if 3L or more is applied within 24 hours.

Conditions for safe storage, including any incompatibilities Keep out of reach of children.
Do not store near heat or flame.
Store in original container tightly closed, in a well-ventilated area, as cool as possible, away from sources of ignition and foodstuffs. Do not store for prolonged periods in direct sunlight. Store in accordance with NZS 8409 Management of Agrichemicals.
Do not store with HSNO Class 1, 2, 3.2, 4 or 5 substances.
Stores containing 100L of ADMIRAL require secondary containment and are subject to signage, and more than 100L requires emergency response plans.
Stores containing 500L must have at least 2 fire extinguishers.

Other Information 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.

Section 8 - Exposure Controls and Personal Protection

Occupational Exposure Limits (OEL) No exposure limits (WES, TEL or EEL's) have been specifically assigned for this product. WES TWA for Emery = 10mg/m³

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 safety goggles, waterproof gloves, washable hat, cotton overalls buttoned to the neck and wrist, boots, and a NIOSH approved half face mask with organic vapour cartridge + dust/mist prefilter.

Hygiene Measures Do not eat drink or smoke while using.
Remove protective clothing and wash hands and face thoroughly before meals and

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after work. Wash protective clothing daily after work. Wash splashes of concentrate from skin immediately.

Section 9 - Physical and Chemical Properties

Form	Liquid
Appearance	Pale yellow to clear liquid
Odour	Mild aromatic odour
Decomposition Temperature	Information is not available.
Solubility in Water	Forms an emulsion in water.
Specific Gravity	0.92g/mL @ 20°C
pH	5.7 (10%v/v)
Vapour Pressure	<0.013 mPa (23°C) (for Pyriproxyfen)
Vapour Density (Air=1)	Information is not available.
Odour Threshold	Information is not available.
Viscosity	18.5 cps
Partition Coefficient: n-octanol/water	Kow logP = 1.86 (pH7) for pyriproxyfen.
Flash Point	67°C (setaflash cc)
Flammability	Information is not available.
Auto-ignition Temperature	Information is not available.
Flammable Limits - Lower	Information is not available.
Flammable Limits - Upper	Information is not available.
Initial Boiling Point and Boiling Range	Information is not available.
Kinematic Viscosity	Information is not available.
Particle Characteristics	Information is not available.
Relative Density	S.g./density 1.14 20°C (for pyriproxyfen)
Melting/Freezing Point	M.p. 47°C and F.p. 119°C for pyriproxyfen.
Other Information	(EC) Emulsifiable concentrate

Section 10 - Stability and Reactivity

Chemical Stability	When stored appropriately this product should show no significant degradation for 3 year(s) from the date of manufacture.
Conditions to Avoid	Avoid direct sunlight.
Hazardous Polymerization	Hazardous polymerisation will not occur.

Section 11 - Toxicological Information

Toxicology Information	No specific toxicological data is available for this product. Data below is for constituents.
Acute Toxicity - Oral	LD50 (rat, female) is 3,773mg/kg
Acute Toxicity - Inhalation	LC50 (rat) (4hr) is >3.1mg/L - no deaths

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Acute Toxicity - Dermal	LD50 (rabbit) is >2,000mg/kg
Ingestion	Due to the low viscosity of the product, it can directly enter the lungs if swallowed (called aspiration). This can occur during the act of swallowing or when vomiting. Once in the lungs, the substance is very difficult to remove and can cause severe injury to the lungs.
Skin	May cause skin irritation.
Skin Corrosion/Irritation	Moderate irritant (rabbit)
Serious Eye Damage/Irritation	Slight irritant.
Skin Sensitisation	This product produced mild and transient eye irritation in rabbits, which cleared within 72 hours after treatment.
Germ Cell Mutagenicity	Non-sensitising. This product did not produce a positive skin sensitisation reaction in a Buehler Skin Sensitisation Test.
Carcinogenicity	Information is not available.
Reproductive Toxicity	Information is not available.
STOT - Repeated Exposure	Pyriproxyfen technical did not produce reproductive toxicity in animal studies. No developmental toxicity was produced in animals exposed, even at doses that were toxic to pregnant animals. This product is not expected to be a reproductive hazard when used according to label directions.
Aspiration Hazard	Information is not available.
Subchronic/Chronic Toxicity	Aspiration hazard Category 1.
Other Information	Studies with pyriproxyfen technical indicated that repeated high exposures produced changes in the liver, kidney and red blood cells but did not produce cancer in test animals. This product contains a solvent mixture. Reports have associated repeated and prolonged occupational overexposures to solvents with permanent brain and nervous system damage. Symptoms reported include fatigue, concentration difficulties, anxiety, depression, rapid mood swings and short term memory loss. Since many other diseases cause some or all of these symptoms, a doctor should be consulted in any appear. Overall, this product is not expected to be a chronic hazard when used according to the label directions.
	The Australian Acceptable Daily Intake (ADI) for pyriproxyfen for a human is 0.07 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 7 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 APVMA, 'ADI List', Edition 4/2023).

Section 12 - Ecological Information

Ecotoxicity	Hazardous to the aquatic environment acute Category 1, Hazardous to the aquatic environment chronic Category 1.
Persistence and Degradability	Soil persistent.
Mobility	Information is not available.
Bioaccumulative Potential	Bioaccumulative. Log Kow = 5.37
Basis for Assessment	Ecotoxicological data have not been determined specifically for this product. Data below is for the active ingredient unless otherwise stated.
Acute Toxicity - Fish	LC50 (96hr) for rainbow trout is >0.325mg/l for pyriproxyfen.
Acute Toxicity - Daphnia	EC50 (48hr) for daphnia is 0.40mg/l for pyriproxyfen.
Acute Toxicity - Algae	EC50 (72hr) for Selenastrum capricornutum is 0.064mg/l for pyriproxyfen.

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Acute Toxicity - Other Organisms LD50 for mallard duck and bobwhite quail is >2,000mg/kg for pyriproxyfen.

Section 13 - Disposal Considerations

Product Disposal Dispose of product only by using according to the label, or at an approved landfill.

Container Disposal Do not burn.
Triple rinse empty container and add rinsate to the spray tank. Recycle empty container. Otherwise crush and bury in a suitable landfill.

Section 14 - Transport Information

Transport Information It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.

UN Number 3082

Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. - (pyriproxyfen)

Hazard Class 9

Hazchem Code 2Z

Packaging Method -

Packing Group III

EPG Number -

IERG Number 47

IMO Marine Pollutant Yes. Environmentally Hazardous Substance mark required.

IMDG EMS F-A, S-F

Other Information Do not carry more than 1L of ADMIRAL on a passenger service vehicle. 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.

Section 15 - Regulatory Information

National and or International Regulatory Information Registered pursuant to the ACVM Act 1997, No. P7954
See www.foodsafety.govt.nz for registration conditions
Approved pursuant to the HSNO Act 1996, Approval Code HSR100004
See www.epa.govt.nz for approval controls.

Packaging and Labelling DANGER
READ SAFETY DIRECTIONS BEFORE OPENING OR USING
KEEP OUT OF REACH OF CHILDREN

Section 16 - Any Other Relevant Information

Date of preparation or last revision of SDS February 2019.

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. Various changes and updates made to the document to comply with GHS7.
...End Of MSDS...

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