SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product:	**PROLIFIC**
Chemical name of active:	Carbendazim
Product Use:	Fungicide
Restriction of Use:	Refer to Section 15
New Zealand Supplier:	ADAMA New Zealand Ltd
Address:	Level 1/93 Bolt Road Tahunanui, Nelson 7011
Telephone:	+64 3 543 8275
E-mail:	nzorders@adama.com
Emergency Telephone:	**0800 764 766 (National Poison Centre)** **0800 734 607 (24hr Emergency Response)**
Date of SDS Preparation:	19 March 2024

Section 2. Hazards Identification

This substance is hazardous according to the Hazardous Substances (Hazard Classification) Notice 2020

HSNO Approval No: HSR000453

Pictograms

Signal Word: **DANGER**

HSNO Classification	Hazard Code	Hazard Statement
Germ cell mutagenicity Category 1	H340	May cause genetic defects.
Reproductive toxicity Category 1	H360	May damage fertility or the unborn child.
Specific target organ toxicity (repeated exposure) Category 2	H373	May cause damage to organs through prolonged or repeated exposure.
Hazardous to the aquatic environment acute Category 1	H400	Very toxic to aquatic life.
Hazardous to the aquatic environment chronic Category 1	H410	Very toxic to aquatic life with long lasting effects
Hazardous to soil organisms	H422	Toxic to the soil environment.

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe fumes, vapours or spray.

P273	Avoid unintended release into the environment.
P280	Wear protective clothing as detailed in Section 8.

Response Code	**Response Statement**
P101	If medical advice is needed, have product container or label at hand.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P391	Collect spillage.

Storage Code	**Storage Statement**
P405	Store locked up.

Disposal Code	**Disposal Statement**
P501	Triple rinse empty container and add rinsate to spray tank. Empty containers and product should NOT be burnt. Crush or puncture containers and bury in a suitable landfill, away from watercourses or if appropriate, recycle. Do not contaminate ponds, waterways and ditches with product or used container.

Section 3. Composition / Information on Ingredients

Ingredients	**Weight %**	**CAS NUMBER.**
Carbendazim	50	10605-21-7
Other non-hazardous ingredients	10-20	Proprietary
Water	To 100	7732-18-5

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes — Rinse cautiously with water for several minutes. If eye irritation occurs: get medical advice/attention.

If on Skin — Wash with plenty of soap and water. If skin irritation occurs: get medical advice/attention.

If Swallowed — Wash mouth with water and contact National Poisons Centre 0800 764 766 or a doctor if you feel unwell.

If Inhaled — Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed
Symptoms of:
Ingestion: Not applicable.
Skin: Not applicable.
Inhalation: Not applicable.
Eyes: Not applicable.
Chronic: May cause genetic defects. May damage fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.

Section 5. Fire Fighting Measures

Hazard Type	Non-Flammable or combustible. There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.
Hazards from combustion products	This product us likely to decompose only after heating to dryness, followed by further strong healing. Fire decomposition products from this product may be toxic if inhaled.
Suitable Extinguishing media	Use extinguishing media suited to burning materials.
Precautions for firefighters and special protective clothing	Self-contained breathing apparatus and total protection required in enclosed areas.
HAZCHEM CODE	**2X**

Section 6. Accidental Release Measures

Wear full protective clothing as detailed in Section 8. Evacuate area from unnecessary personnel.

Environmental precautions
Dispose of this material and its container at hazardous or special waste collection point, in accordance with national and regional regulations. If the product has contaminated surface water, inform the appropriate authorities.

Methods and material for containment and cleaning up
Absorb remainder in sand, vermiculite or other inert material. Dispose of in an authorised waste collecting point like Agrecovery or as per Local Regulations.

Section 7. Handling and Storage

Precautions for Handling:
- Do not handle until all safety precautions have been read and understood.
- Do not breathe fumes, vapours or spray.
- Avoid unintended release into the environment.
- Use personal protective equipment as specified in Section 8.

Precautions for Storage:
- Store away from incompatible materials listed in Section 10.
- Keep away from children.
- Store in the original, unopened container in a cool, dry place, out of direct sunlight and away from stockfeed or foodstuffs.
- As a substance with aquatic ecotoxicity classifications, storage of Prolific must be carried out in such a manner as to prevent contamination of waterways. Stores containing more than 100L of Prolific require bunding and are subject to signage. Storage must generally be in accordance with The New Zealand Standard for the Management of Agrichemicals (NZS8409).

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

	TWA		STEL	
Substance	**ppm**	**mg/m3**	**ppm**	**mg/m3**

None of the ingredients have workplace exposure limits listed on WES.

Engineering Controls

No special ventilation requirements are normally necessary for this product.

Personal Protection Equipment

Eyes	Eye protection is not usually required, however if in doubt wear protective glasses or safety goggles.
Hands and Skin	Impervious elbow-length gloves. Wear protective clothing, including cotton overalls buttoned to the neck and wrist.
Respiratory	Respiratory protection is not required if good ventilation is maintained.
General	When handling, do not eat, drink or smoke. Wash hands thoroughly after handling. Wash clothing separately before re-use.

Section 9 Physical and Chemical Properties

Appearance	Liquid
Colour	Viscous white
Odour	Mild odour
Odour Threshold	Not applicable
pH	4 - 5
Boiling Point	Approx. 100 °C at 100 kPa
Freezing/Melting Point	Not applicable
Flash Point	Not applicable
Flammability	Not flammable
Upper and Lower Exposure Limits	Not applicable
Vapour Pressure	2.37 kPa @ 20◦C (water vapour pressure)
Vapour Density	Not applicable
Specific Gravity	1.22-1.23
Solubilities	Completely soluble in water
Partition Coefficient:	Not applicable
Auto-ignition Temperature	Not applicable
Viscosity, dynamic	Not applicable
Particle Characteristics	Not applicable

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Conditions to Avoid	Keep in cool palace, preferably below 30◦C.
Incompatible Materials	None under normal conditions
Hazardous Decomposition Products	This product is likely to decompose only after heating to dryness, followed by further strong heating. Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Nitrogen and its compounds and oxides of nitrogen's. Occasionally hydrogen cyanide gas.

Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable.
Dermal	Not applicable.
Inhalation	Not applicable.
Eye	Not applicable.
Skin	Not applicable.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	May damage fertility or the unborn child.
Germ Cell Mutagenicity	May cause genetic defects.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	May cause damage to organs through prolonged or repeated exposure.

Carbendazim

Acute toxicity - Oral: LD50 (Rat) > 15,000mg/kg
LD50 (Dog) > 2,500mg/kg
Acute toxicity - Dermal: LD50 (Rat) > 2,000 mg/kg
Acute toxicity - Dermal: LD50 (Rabbit) > 10,000 mg/kg

Section 12. Ecotoxicological Information

HSNO Classifications: Hazardous to the aquatic environment acute Category 1, Hazardous to the aquatic environment chronic Category 1, Hazardous to soil organisms.

Carbendazim

Ecotoxicity:	Birds:	LD50 quail	=	5826-15595 mg/kg
	Fish:	LC50 carp	=	0.61 mg/L
		LC50 rainbow trout	=	0.83 mg/L
		LC50 bluegill sunfish	=	17 mg/L
		LC50 guppie	=	>8mg/L
Algae:		EC50 1.3mg/L		
Bees:		LD50 50µg/bee		
Daphnia:		EC50 0.13mg/L		
Worms:		LD50 6mg/kg (Eisenia foetida)		

Persistence and degradability	No data available
Bioaccumulation	No data available
Mobility in Soil	No data available
Other adverse effects	No data available

Section 13. Disposal Considerations

Disposal Method: Wherever possible completely use material by using according to label instructions. Dispose of unwanted product and wastes from spillages as hazardous substances in accordance with local and national regulations using a licensed waste disposal company. Triple rinse containers before puncturing and offering for recycling or landfill.

Precautions: Do not allow product to enter waterways.

Disposal methods to avoid: Do not burn product or container.

Section 14 Transport Information

This product is classified as a Dangerous Good for transport in NZ; NZS 5433

Road and Rail Transport

UN No:	3082
Class-primary	9
Packing Group	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, (CARBENZADIM)

Air Transport

UN No:	3082
Class-primary	9
Packing Group	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, (CARBENZADIM)

Marine Transport

UN No:	3082
Class-primary	9
Packing Group	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, (CARBENZADIM)

Special Provisions:

If the product's individual container is below 5L/kg, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

Section 15 Regulatory Information

This substance is hazardous according to the Hazardous Substances (Hazard Classification) Notice 2020

HSNO Approval Code: HSR000453

HSNO Classification: Germ cell mutagenicity Category 1, Reproductive toxicity Category 1, Specific target organ toxicity (repeated exposure) Category 2, Hazardous to the aquatic environment acute Category 1, Hazardous to the aquatic environment chronic Category 1, Hazardous to soil organisms.

HSW (HS) Regulations 2017 and EPA Notices	**Trigger Quantity**
Certified Handler	Not required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	100L
Emergency Response Plan	100L
Secondary Containment	100L
Hazardous Property Controls Notice 2017	
HPC Notice Part 1	Hazardous Property Controls preliminary provisions
HPC Notice Part 3	Hazardous substances in a place other than a workplace
HPC Notice Part 4 Subpart A	Substances that are hazardous to the environment: Site and storage controls
HPC Notice Part 4 Subpart B	Use of substances that are hazardous to the environment
HPC Notice Part 4 Clause 47	Equipment for environmentally hazardous substances must be appropriate
HPC Notice Part 4 Clause 48	Records of application of ecotoxic pesticides and plant growth regulators
HPC Notice Part 4 Clause 52	Agrichemicals that are hazardous to the aquatic environment must not be applied to water
HPC Notice Part 4 Subpart C	Qualifications required for the application of substances that are hazardous to the environment
ACVM Act and Regulations	
Registered pursuant to the ACVM Act 1997, See www.foodsafety.govt.nz for registration conditions	No. P005150

Section 16 Other Information

Glossary

ACVM	Agricultural Compounds and Veterinary Medicines Act 1997.
EC50	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority.
HSNO	Hazardous Substances and New Organisms Act 1996.
HSW	Health and Safety at Work Act 2015.
HSW (HS) Regulations 2017.	Health and Safety at Work (Hazardous Substances) Regulations
LC50	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD50	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.

TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level.
WES	Workplace Exposure Limit.

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer:

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