



SAFETY DATA SHEET CHIEF FUNGICIDE

Section 1: Identification of the Substance and Supplier

Product name : CHIEF FUNGICIDE
Chemical name of active Ingredient(s): Carbendazim is a benzimidazole derivative
Supplier: ADAMA New Zealand Limited
Level1/19 Elms Street, Wakatu Estate, Stoke, Nelson, New Zealand
P.O. Box 1799, Nelson New Zealand.
+64 3 543 8275 Fax: +64 3 543 8274
Telephone
Emergency Telephone: 0800 POISON (0800 764 766)

Section 2: Hazards Identification

Hazard Classifications: 6.6A, 6.8A, 6.9B, 9.1A, 9.2B
Most important hazards: TOXICITY
Warning –
Danger – May cause heritable mutations in human cells.
May cause reproductive/developmental damage from repeated oral exposure.
May cause liver damage from repeated oral exposure at high doses.
ECOTOXICITY
Very toxic to aquatic organisms. Avoid contamination of any water supply with product or empty container. Toxic to the soil environment.

Section 3. Composition/information on Ingredients

Substance/preparation	Preparation	
Information on hazardous ingredients *		
Common name	CAS No.	%
Carbendazim	10605-21-7	50
Other non hazardous ingredients	secret	10-20
Water	7732-18-5	to 100

- Occupational Exposure Limit(s), if available, are listed in section 8

Section 4: First-Aid Measures

You should call the National Poisons Centre 0800 764 766 if you feel that you may have been poisoned, burned or irritated by this product.

First-aid measures: Remove victim from area of exposure. Wash off remaining material with plenty of water.
Inhalation: First aid is not generally required. If in doubt, contact National Poisons Centre 0800 764766 or a doctor.
Ingestion: If swallowed do NOT induce vomiting. Wash mouth with water and contact National Poisons Centre 0800 764 766 or a doctor
Skin contact: Irritation is unlikely. However, if irritation occurs, remove contaminated clothing. Wash skin thoroughly with lukewarm water and soap for 5 minutes or until chemical is removed.
Eye contact: No effects expected, however, if irritation occurs, wash out gently with plenty of lukewarm water with the eyelid held wide open for at least for 5 minutes or until chemical is removed.
Protection of first-aiders: Use appropriate protection (see section 8).



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Section 5: Fire-Fighting Measures

Extinguishing media	There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.
Suitable:	Not combustible. Use extinguishing media suited to burning materials.
Hazardous thermal (de)composition products:	This product is likely to decompose only after heating to dryness, followed by further strong heating. Fire decomposition products from this product may be toxic if inhaled.
Protection of fire-fighters:	Self-contained breathing apparatus and total protection required in enclosed areas.

Section 6: Accidental Release Measures

Personal precautions:	Wear suitable protective clothing, including face mask, face shield and gauntlets. All skin areas should be covered.
Environmental precautions:	Prevent spillage from entering drains or water courses.
Methods for cleaning up:	Absorb remainder in sand, vermiculite or other inert material. Dispose of in an authorized waste collecting point.

Section 7: Handling and Storage

Handling:	Keep out of the reach of children. Do not eat, drink or smoke while using.
Storage:	Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Store in the original, unopened container in a cool, dry place, out of direct sunlight and away from stockfeed or foodstuffs. As a Class 9 Substance with Ecotoxicity Classifications, storage of Chief Fungicide must be carried out in such a manner as to prevent contamination of waterways. Stores containing more than 100L of Chief Fungicide require bunding and are subject to signage. Storage must generally be in accordance with The New Zealand Standard for the Management of Agrichemicals (NZS8409). See Safety Data Sheet for further information.

Section 8: Exposure Controls/Personal Protection

Engineering measures:	No special ventilation requirements are normally necessary for this product.
Hygiene measures:	When handling, do not eat, drink or smoke. Wash hands thoroughly after handling. Wash clothing separately before re-use.
Occupational Exposure Limits	
Common name:	Carbendazim
ADI	0.03mg/kg/day
NOEL	2.5mg/kg/day
Personal protective equipment:	
Respiratory system:	Respiratory protection is not required if good ventilation is maintained.
Skin and body:	Wear protective clothing, including cotton overalls buttoned to the neck and wrist.
Hands:	Impervious elbow-length gloves
Eyes:	Eye protection is not usually required, however if in doubt wear protective glasses or safety goggles.

Section 9: Physical and Chemical Properties

Physical state:	Liquid
Colour:	Viscous white
Odour:	Mild odour
Boiling point:	Approximately 100°C @ 100kPa.
Vapour pressure:	2.37 kPa @ 20°C (water vapour pressure)
Specific Gravity:	1.22-1.23
Solubility in water:	Completely soluble in water
Octanol/water partition coefficient	No data
pH:	No data



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Flammability: Not flammable
Explosion properties : Not Explosive
Oxidation properties: Not oxidizing

Section 10: Stability and Reactivity

Stability: Unlikely to react or decompose under normal storage conditions.
Keep in cool place, preferably below 30°C.
Hazardous decomposition 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.
Products: Nitrogen and its compounds and oxides of nitrogen's. Occasionally hydrogen cyanide gas.
Polymerisation: Unlikely to undergo polymerization processes.

Section 11: Toxicological Information

Toxicity: Carbendazim belongs to the methyl benzimidazole carbamate (MBCs) class of chemicals. There is some evidence that it may be mutagenic, although the evidence at present seems circumstantial.

Acute toxicity - Oral: **Carbendazim**
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: Ecological Information

Ecotoxicity:

Birds:	LD ₅₀	quail	=	5826-15595 mg/kg
Fish:	LC ₅₀	carp	=	0.61 mg/L
	LC ₅₀	rainbow trout	=	0.83 mg/L
	LC ₅₀	bluegill sunfish	=	17 mg/L
	LC ₅₀	guppy	=	>8mg/L
Algae:	EC ₅₀	1.3mg/L		
Bees:	LD ₅₀	50µg/bee		
Daphnia:	EC ₅₀	0.13mg/L		
Worms:	LD ₅₀	6mg/kg (<i>Eisenia foetida</i>)		

Section 13: Disposal Considerations

Methods of disposal: 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 14: Transport Information

UN Number 3082
Proper shipping name Environmentally hazardous substance, Liquid, N.O.S, CARBENZADIM
DG Class 9
Packing Group III
Hazchem Code 2X
Marine Pollutant Yes
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National transport regulations: Do not carry this product on a passenger service vehicle.



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Segregation: Check the land transport Rule Dangerous Goods 1999, Rule 45001 for additional information. Sea transport may require additional segregation. Refer: NZS5433; Sea Segregation, or the International Maritime Dangerous Goods Code for details.

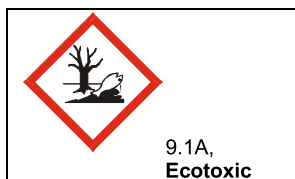
Section 15: Regulatory Information

New Zealand Regulatory Information:

NZFSA Approval: Registered pursuant to the ACVM Act 1997. No P5150
See www.nzfsa.govt.nz/acvm for registration conditions.

Approved pursuant to the HSNO Act 1996, Approval No. HSR000453
See www.erna.govt.nz for registration conditions

HSNO Classifications: 6.6A, 6.8A, 6.9B, 9.1A, 9.2B
The Class's 9.1A require that an ERMA Approved Handler is required when Prolific is applied in a wide dispersive manner or is used by a commercial contractor or is applied directly onto or into water bodies.



Section 16: Other Information

Note: This product is a registered agricultural chemical and must be therefore be used in accordance with the container label directions. A comprehensive package of toxicological and environmental data for the active ingredients of this product has been submitted to the Government health and environment authorities and has been evaluated by expert toxicologists and environmental scientists.

The information contained in the Safety Data sheet is correct to the best of our knowledge at the date of issue. It is intended as a guide for the safe use, handling, disposal, storage and transportation and is not intended as a warranty or as a specification. The information relates only to the product specified and may not be suitable for combinations with other materials or in processes other than those specifically described herein.