SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product:	**PHOENIX® FUNGICIDE**
Chemical name of active ing:	N-(Trichloromethylthio)phthalimide
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
Telephone:	+64 3 543 8275
Fax Number:	+64 3 543 8274
Emergency Telephone:	**0800 764 766 (National Poison Centre)**
Date of SDS Preparation:	28 May 2019

Section 2. Hazards Identification

This substance is hazardous according to the *Hazardous Substances (Classification) Notice 2017*

EPA Approval No: HSR101068

Pictograms

Chronic

Ecotoxic

Signal Word: **Warning**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.7B	H351	Suspected of causing cancer.	Carc. 2
9.1A	H400	Very toxic to aquatic life.	Aquatic Acute 1/Aquatic Chronic 1
9.3C	H433	Harmful to terrestrial vertebrates.	-

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P273	Avoid release to the environment.
P281	Use personal protective equipment as required.

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

Storage Code	Storage Statement
P405	Store locked up in the original, unopened container in a cool, dry place, out of direct sunlight and away from stockfeed or foodstuffs.

Disposal Code	Disposal Statement
P501	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 and add rinsate to spray tank 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 3. Composition / Information on Ingredients

Ingredients	Wt%	CAS NUMBER.
Folpet	38-42	133-07-3
Fumaric Acid	1.0-1.5	110-17-8
Methenamine	0.5-1.0	100-97-0
Sulphonated aromatic polymer, sodium salt	3.0-5.0	Proprietary
Other non-hazardous ingredients	Balance	NA

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes — Rinse cautiously with water for 15 minutes. If eye irritation persists: Get medical advice.

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

If Swallowed — If swallowed do NOT induce vomiting. Rinse mouth. Drink plenty of water. For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor immediately.

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:

Ingestion: Not applicable.
Inhalation: Not applicable.
Skin: Not applicable.
Eye: Not applicable.
Chronic: Suspected of causing cancer.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable.
Hazards from combustion products	CSC12, HCI, SOX, NOX, CO, CO2
Suitable Extinguishing media	Small fire: Dry chemical, foam, carbon dioxide. Large fire: Water spray, fog or regular foam.
Precautions for firefighters and special protective clothing	In the event of fire, wear self-contained breathing apparatus. In the event of fire and/or explosion do not breathe fumes.
HAZCHEM CODE	**3Z**

Section 6. Accidental Release Measures

In the event of a major spill, prevent spillage from entering drains or water courses. Wear full protective clothing including eye/face protection. Evacuate area from unnecessary personnel.

Absorb remainder in sand or other inert material, placing in appropriate containers for disposal.

Dispose of according to Local Regulations.

Section 7. Handling and Storage

Precautions for Handling:

- Keep out of reach of children.
- Read label before use.
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Avoid release to the environment.
- Use personal protective equipment as required.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Keep away from children.
- Store locked up.
- Keep container tightly closed in a dry and well-ventilated place.
- 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 Phoenix Fungicide must be carried out in such a manner as to prevent contamination of waterways. It is recommended that The New Zealand Standard for the Management of Agrichemicals (NZS8409) is followed as a means of meeting the secondary containment provisions of the HSNO Emergency Management Regulations.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

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

No ingredients have exposure limits

Workplace Exposure Standard – Time Weighted Average (WES-TWA).The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-

TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices NOV 2017 9TH EDITION.

Engineering Controls
Ensure adequate ventilation, especially in confined areas.

Personal Protection Equipment

Eyes	Tight sealing safety goggles or face shield.
Hands and Skin	Wear suitable protective clothing and chemical resistant boots. Chemical resistant gloves.
Respiratory	During spraying wear suitable respiratory equipment.
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	Beige white liquid
Odour	Organic Slight
Odour Threshold	Not applicable
pH	4.5 - 6
Boiling Point	Not applicable
Melting Point	Not applicable
Freezing Point	Not applicable
Flash Point	>80^{0}C
Flammability	Not applicable
Upper and Lower Exposure Limits	Not applicable
Vapour Pressure	Not applicable
Vapour Density	Not applicable
Relative Density	1.24 – 1.28 (22^{O}C)
Solubilities	Emulsifiable.
Partition Coefficient:	Not applicable
Auto-ignition Temperature	>400^{0}C
Decomposition Temperature	Not applicable
Kinematic Viscosity	1500 mm^2/s 40^{0}C
Particle Characteristics	Not applicable

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Conditions to Avoid	Heat, flames and sparks.
Incompatible Materials	No information available.
Hazardous Decomposition Products	No information available.

Section 11 Toxicological Information

Acute Effects:

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

Skin	Not applicable.

Chronic Effects:

Carcinogenicity	Suspected of causing cancer.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Not applicable.

		Value	**Species**	**Method**
Oral LD_{50} mg/kg	:	>5000	Rat	OECD 401
Dermal LD_{50} mg/kg	:	>2000	Rat	OECD 402
Inhalation LC_{50} mg/l/4h	:	>5.28	Rat	OECD 403

Section 12. Ecotoxicological Information

HSNO Classes: 9.1A = Very toxic to aquatic life.
9.3C = Harmful to terrestrial vertebrates.

Aquatic toxicity		**Values**	**Species**	**Method**
Fish 96-hour LC_{50} mg/l	:	0.256	Rainbow trout	OECD 204
Crustacea 48-hour EC_{50} mg/l:		3.9	Daphnia magna	OECD 202
Algae 72-hour EC_{50} mg/l	:	48.4	Scenedesmus subspicatus	OECD 201
Other plants EC_{50} mg/l	:			OECD 221

Terrestrial toxicity		
Birds oral LD_{50} mg/kg		
Chemical name		
Folpet :	>2510	Bobwhite quail EPA 71-1
Bees oral LD_{50} pg/ee		
Chemical name		
Folpet :	>236	EPPO 170 (1992) Oral
Persistence and degradability		
Abiotic degradation		
Water DT_{50} days		
Folpet :	<0.05 O	ECD 111 pH 7
Soil DT_{50} days		
Folpet :	4.3	SETAC 25°C
Biodegradation		
Folpet :	Readily biodegradable	OECD 301 B
Bioaccumulative potential		
Partition coefficient		
(n-octanol/water) Log Pow		
Folpet :	3.017	
Bioconcentration factor (BCF)		
Folpet :	56	OECD 305E
Mobility in soil		
Adsorption/desorption		
Folpet :	304	Koc

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 and add rinsate to spray tank before puncturing and offering for recycling or landfill.

FREE RECYCLING
AGRECOVERY
www.agrecovery.co.nz

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 5433:2012

Road and Rail Transport

UN No:	3082
Class-primary	9
Packing Group	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID (Folpet)

Air Transport

UN No:	3082
Class-primary	9
Packing Group	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID (Folpet)

Marine Transport

UN No:	3082
Class-primary	9
Packing Group	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID (Folpet)

Special Provisions:

DGLQ Limit = 5L

Section 15 Regulatory Information

HSNO Controls	Trigger Quantity
Approved Handler	The substance must be under the personal control of an approved handler when the substance is: (a) applied in a wide dispersive manner; or (b) used by a commercial contractor.
Location Certificate	Not required
Tracking Trigger Quantities	Any
Signage Trigger Quantities	100L
Emergency Response Plan	100L
Secondary Containment	100L

Restrictions and Controls

1. **This substance must not be applied into or onto water[1]**

[1] where 'water' means water in all its physical forms, whether flowing or not, and whether over or under ground, but does not include water in any form while in a pipe, tank or cistern or water used in the dilution of the substance prior to application.

2. Application Parameters

A person applying this substance must ensure the application is carried out in accordance with the following application restrictions:

(a) the substance must not be applied at rates exceeding 1.5 L of formulated product/ha per application (equivalent to 0.75 kg folpet / ha); and

(b) the substance must not be applied to the same area more than two times in any 365 day period; and

(c) an interval of at least 14 full days must be observed before the substance is reapplied to the same area.

3. Restriction On Method Of Application

(1) No person may apply this substance using aerial application methods.

EPA Approval Code: HSR101068

HSNO Classification: 6.7B, 9.1A, 9.3C

Refer to EPA website www.epa.govt.nz for controls document - HSR101068

HSW (HS) Regulations 2017	**Trigger Quantity**
Signage Trigger Quantities (Schedule 3)	100L (9.1A)
Emergency Response Plan (Schedule 5)	100L (9.1A)
Secondary Containment (Schedule 5)	100L (9.1A)
Tracking (Schedule 26)	Not required
HSW(Hazardous substance) Regulations Part 4 Certified Handlers and supervision and training of workers	HSW Reg 4.5 – 4.6 Information, instruction, training and supervision.
HSNO Additional Controls (Restrictions of use)	
77A	This substance must not be applied into or onto water[1] [1] where 'water' means water in all its physical forms, whether flowing or not, and whether over or under ground, but does not include water in any form while in a pipe, tank or cistern or water used in the dilution of the substance prior to application.
77A - A maximum application rate is set for this substance.	1) A person applying this substance must ensure the application is carried out in accordance with the following application restrictions: (a) the substance must not be applied at rates exceeding 1.5 L of formulated product/ha per application (equivalent to 0.75 kg folpet / ha); and (b) the substance must not be applied to the same area more than two times in any 365 day period; and (c) an interval of at least 14 full days must be observed before the substance is reapplied to the same area.
77A - A restriction has been placed on the application method for this substance.	(1) No person may apply this substance using aerial application methods.
Hazardous Property Controls Notice 2017	

HPC Notice Part 4 Clause 47	Equipment for class 9 substances must be appropriate
HPC Notice Part 4 Clause 48	Records of application of class 9 pesticides and plant growth regulators
HPC Notice Part 3	Hazardous substances in a place other than a workplace
HPC Notice Part 4 Subpart A	Site and storage controls for class 9 substances
HPC Notice Part 4 Subpart C	Qualifications required for application of class 9 Pesticides
ACVM Act and Regulations	
ACVM Approval No See www.foodsafety.govt.nz for registration controls	P9257

Section 16 Other Information

Glossary

EC50	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
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.
OSHA	American Occupational Safety and Health Administration.
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 5433:2012
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer

This document has been issued by TCC (NZ) Ltd and serves as their Safety Data Sheet ('SDS'). It is based on information concerning the product which has been provided to TCC (NZ) Ltd or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer. While TCC (NZ) have taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, TCC (NZ) Ltd accept no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS

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Please contact the ADAMA, if further information is required.

Issue Date: 28 May 2019 Review Date: 28 May 2024