SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product:	**MERPAN 800 WDG**
Chemical name of active	1,2,3,6-Tetrahydro-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, 7011, Nelson
Telephone:	+64 3 543 8275
Fax Number:	+64 3 543 8274
Emergency Telephone:	**0800 764 766 (National Poison Centre)**
Date of SDS Preparation:	10 July 2018

Section 2. Hazards Identification

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

EPA Approval No: HSR000503

Pictograms

Allergic Chronic Corrosive Ecotoxic

Signal Word: **DANGER**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.3B	H316	Causes mild skin irritation.	Skin Irrit. 3
6.5B	H317	May cause an allergic skin reaction.	Skin Sens. 1
6.7B	H351	Suspected of causing cancer.	Carc. 2
8.3A	H318	Causes serious eye damage.	Eye Corr. 1
9.1A	H400	Very toxic to aquatic life.	Aquatic Acute 1

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.
P261	Avoid breathing dust.
P272	Contaminated work clothing should not be allowed out of the workplace.

P273	Avoid release to the environment.
P280	Wear protective clothing as detailed in Section 8.
P281	Use personal protective equipment as required.

Response Code	**Response Statement**
P101	If medical advice is needed, have product container or label at hand.
P310	Immediately call a POISON CENTER or doctor/physician.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

Storage Code	**Storage Statement**
P405	Store locked up.
	Store locked up 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 Merpan 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. See Safety Data Sheet for further information.

Disposal Code	**Disposal Statement**
P501	Refer to Section 13

Section 3. Composition / Information on Ingredients

Ingredients	**Wt %**	**CAS NUMBER.**
Captan	80	133-06-2
Condonsod naphthalene sulfonate	~8	Proprietary
Dialkytnaphthalene sulphonate	~3	1322-93-6
Other ingredients not contributing to the overall classification of the substance or non hazardous	To balance	NA

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes — Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

If on Skin — Wash off immediately with soap and plenty of water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.

If Swallowed — Wash out mouth with plenty of water. Induce vomiting. Never give anything by mouth to an unconscious person. Call a POISON CENTER or doctor/physician 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:

Ingestion: Not applicable.

Skin: Causes mild skin irritation. May cause an allergic skin reaction. Repeated exposure may cause contact dermatitis.

Inhalation: Not applicable.

Eyes: Causes serious eye damage.

Chronic: Suspected of causing cancer.

Notes to physician: There is no specific antidote. If poisoning is suspected apply symptomatic therapy. If ingested perform gastric lavage and administer activated charcoal.

Section 5. Fire Fighting Measures

Hazard Type	Not Flammable.
Hazardous thermal (de)composition products	$CSCI_2$, HCI, SO_X, CO, CO_2
Suitable Extinguishing media	In case of a small fire: foam or dry chemical, carbon dioxide. In case of a large fire: Water spray, fog or regular foam.
Precautions for firefighters and special protective clothing	Wear suitable protective clothing. Self-contained breathing apparatus.
HAZCHEM CODE	**2Z**

Section 6. Accidental Release Measures

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

Environmental precautions

Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Collect spilled material with shovel, place into a clean container and cover container loosely. Dispose of container in a suitable landfill or take to an Agrecovery collection site.

Section 7. Handling and Storage

Precautions for Handling:

- Read label before use.
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Avoid breathing dust.
- Contaminated work clothing should not be allowed out of the workplace.
- Avoid release to the environment.
- Wear protective clothing as detailed in Section 8.
- Use personal protective equipment as required.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Keep away from children.
- Keep locked up.
- Keep container tightly closed.
- Keep only in the original container in a cool, well-ventilated place. Keep container dry.
- Multi walled paper bag with plastic liner is the suitable packaging material.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA ppm	TWA mg/m3	STEL ppm	STEL mg/m3
Captan [133-06-2]		5		

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

Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.

Personal Protection Equipment

Eyes	Safety goggles or face shield. Avoid wearing contact lenses.
Hands and Skin	Wear chemical resistant gloves, wear suitable protective clothing and chemical resistant boots.
Respiratory	During spraying wear suitable respiratory equipment.

Section 9 Physical and Chemical Properties

Appearance	Light Brown Granules
Odour	Faint Odour(characteristic)
Odour Threshold	Not applicable
pH	Not applicable
Boiling Point	Captan decomposes
Melting Point	Captan: 158-164^{o}C
Flash Point	Not applicable
Flammability	Not Flammable
Upper and Lower Exposure Limits	Not Explosive
Vapour Pressure	Captan: 2.4 x 10-4 Pa at 40 oC (Pure)
Density	Not applicable
Bulk Density	650-750 g/L
Relative Density	Not applicable
Solubilities in water	Captan: Insoluble in water
Auto-ignition Temperature	Not applicable
Octanol/water partition coefficient	Captan: K_{ow} = 610
Molecular Weight	Captan 300.61

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Conditions to Avoid	Protect from (sun) light, open flame sources of heat and humidity.
Incompatible Materials	Alkali materials, such as lime and Bordeaux mixture will reduce fungicidal activity.

Hazardous Decomposition Products	$CSCI_2$, HCI, SO_X, CO, CO_2

Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable. LD50 > 2,000 mg/kg (rat)
Dermal	Not applicable. LD50 > 5,000 mg/kg (rat)
Inhalation	Not applicable.
Eye	Causes severe eye damage.
Skin	Causes mild skin irritation. May cause an allergic skin reaction.

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.

Common name: **Captan**

Carcinogenicity: A two year feeding study of Captan indicated duodenal tumors in mice after repeated administration of high dose levels.

The NOEL (No Observed Effect Level) was 400ppm. No evidence of carcinogenicity was observed in long-term studies with rats.

Information on the mechanism of these tumors establishes a threshold for the duodenal tumors, and indicates that this tumor type is not relevant for human risk assessment at likely exposure levels.

Mutagenicity: Not mutagenic (in-vivo tests)

Reproduction toxicity: Not teratogenic in animals experiments.

Section 12. Ecotoxicological Information

HSNO Classes: 9.1A = Very toxic to aquatic life.

Persistence and degradability	The product is readily biodegradable.
Bioaccumulation	Captan does not bioaccumulate in aquatic organisms.
Mobility in Soil	Captan does not leach to ground water.
Other adverse effects	No data available

Common name: **Captan**

Ecotoxicity: Very toxic to aquatic organisms (fish and algae), in laboratory experiments.

Low toxicity in actual use, due to its hydrolytic instability.

LD50 > 2000 mg/kg birds.

Section 13. Disposal Considerations

Disposal Method: Triple rinse empty container and add rinsate to spray tank. Burn in an appropriate incinerator, if circumstances such as wind direction permit. Otherwise crush or

puncture and bury in a suitable landfill, or if appropriate, recycle. Avoid contamination of any water supply with product or empty container.

Precautions or methods to avoid: Do not allow product to enter waterways.

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:	3077
Class-primary	9
Packing Group	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Captan)

National transport regulations: Do not carry this product on a passenger service vehicle.

Air Transport

UN No:	3077
Class-primary	9
Packing Group	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Captan)

Marine Transport

UN No:	3077
Class-primary	9
Packing Group	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Captan)
Marine Pollutant:	Yes

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.

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

EPA Approval Code: HSR000503
HSNO Classification: 6.3B, 6.5B, 6.7B, 8.3A, 9.1A

HSW (HS) Regulations 2017 and EPA Notices	Trigger Quantity
Certified Handlers	Not required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	100L(9.1A)
Emergency Response Plan	100L(9.1A)
Secondary Containment	100L(9.1A)
HSNO Additional Controls (Restrictions of use)	
77A	This substance must not be applied onto or

	into water.
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 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	
Registered pursuant to the ACVM Act 1997, See www.nzfsa.govt.nz/acvm for registration conditions	No. P7276
For all further controls	Refer to EPA website (www.epa.govt.nz) for controls document - HSR000503

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 prepared by TCC (NZ) Ltd and serves as the suppliers 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.

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