



SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product: **Merpan Max**
Chemical name of active: Captan, 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
Email: nzorders@adama.com

**Emergency Telephone: 0800 764 766 (National Poison Centre)
0800 734 607 (24hr Emergency Response)**

Date of SDS Preparation: 22 February 2023

Section 2. Hazards Identification

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

EPA Approval No: HSR000503

Pictograms



Signal Word: **DANGER**

HSNO Classification	Hazard Code	Hazard Statement
Serious eye damage Category 1	H318	Causes serious eye damage.
Skin sensitisation Category 1	H317	May cause an allergic skin reaction.
Carcinogenicity Category 2	H351	Suspected of causing cancer.
Hazardous to the aquatic environment acute Category 1	H400	Very toxic to aquatic life.

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
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 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.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P305 + P310 + P338 + P351	IF IN EYES: Immediately call a POISON CENTER or doctor/physician. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308	If exposed or concerned: Get medical advice/attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364	Take of contaminated clothing and wash it before reuse.
P391	Collect spillage.

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 an environmentally hazardous substance with aquatic ecotoxicity classifications, storage of Merpan Max 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 secondary containment requirements.

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. Do not allow product to enter waterways. Do not burn product or container.

Section 3. Composition / Information on Ingredients

Ingredients	Wt. %	CAS NUMBER.
Captan	90	133-06-2
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	Immediately call a POISON CENTER or doctor/physician. Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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.
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:	May cause an allergic skin reaction.
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	During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.
Suitable Extinguishing media	Water fog, foam, carbon dioxide or dry chemical.
Precautions for firefighters and special protective clothing	Full protective clothing and self-contained breathing apparatus.
HAZCHEM CODE	2X

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:

- 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 unintended release into the environment.
- Wear protective clothing as detailed in Section 8.

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		STEL	
	ppm	mg/m ³	ppm	mg/m ³
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	Off-white to light yellow granules
Odour	Faint Odour(characteristic)
Odour Threshold	Not applicable
pH	6.0-9.0
Boiling Point	Captan decomposes
Melting Point	Captan: 158-164°C
Flash Point	Not applicable
Flammability	Not Flammable
Upper and Lower Exposure Limits	Not Explosive
Vapour Pressure	Captan: 2.4×10^{-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	Relatively stable in neutral, weakly acidic and weakly alkaline media.
Conditions to Avoid	Protect from (sun) light, open flame sources of heat and humidity.
Incompatible Materials	Compatible with most fungicides formulations except very strong acid/alkaline formulations
Hazardous Decomposition Products	None

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	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:

Carcinogenicity:

Captan

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 animal experiments.

Section 12. Ecotoxicological Information**HSNO Classes:** Hazardous to the aquatic environment acute Category 1.

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:**Ecotoxicity:****Captan**

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: Do not allow product to enter waterways.

Disposal 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



Road and Rail Transport

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

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.

Section 15 Regulatory Information

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

HSNO Approval Code: HSR000503

HSNO Classification: Serious eye damage Category 1, Skin sensitisation Category 1, Carcinogenicity Category 2, Hazardous to the aquatic environment acute Category 1.

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	100 kg
Emergency Response Plan	100 kg
Secondary Containment	100 kg
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	Record of application of agrichemicals
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
For all further controls:	Refer to EPA website www.epa.govt.nz for controls document – HSR000503
ACVM Act and Regulations	
ACVM Approval No	P008677
See www.foodsafety.govt.nz for registration conditions.	

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	Health and Safety at Work (Hazardous Substances) Regulations 2017.
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 5433:2012
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer:

This document has been issued by Adama New Zealand Ltd and serves as their Safety Data Sheet ('SDS'). It is based on information concerning the product which is held by Adama New Zealand Ltd or has been 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. While Adama New Zealand Ltd 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, Adama New Zealand 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. The information herein is given in good faith, but no warranty, express or implied is made.

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