



## SAFETY DATA SHEET

### Section 1. Identification of the material and the supplier

Product: **MIRAGE 450 FUNGICIDE**  
Chemical Name of Active Ing: C15H16C13N3O2  
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  
Email: nzorders@adama.com

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

Date of SDS Preparation: 22 November 2021

### Section 2. Hazards Identification

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

**EPA Approval No:** HSR000599

#### Pictograms



Signal Word: **DANGER**

HSNO Classification	Hazard Code	Hazard Statement
Flammable liquid Category 3	H226	Flammable liquid and vapour.
Acute oral toxicity Category 4	H302	Harmful if swallowed.
Acute dermal toxicity Category 4	H312	Harmful in contact with skin.
Acute inhalation toxicity Category 4	H332	Harmful if inhaled.
Serious eye damage Category 1	H318	Causes serious eye damage.
Reproductive toxicity Category 2	H361	Suspected of damaging 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 terrestrial vertebrates	H433	Harmful to terrestrial vertebrates.

<b>Prevention Code</b>	<b>Prevention Statement</b>
P102	Keep out of reach of children.
P103	Read label before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, sparks, open flames or hot surfaces and other ignition sources. No smoking.
P243	Take precautionary measures against static discharge.
P260	Do not breathe fumes, vapours or spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid unintended release into the environment.
P280	Wear protective clothing as detailed in Section 8.

<b>Response Code</b>	<b>Response Statement</b>
P101	If medical advice is needed, have product container or label at hand.
P301 + P312 + P330	IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.
P303 + P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P305 + 310 + P351+ P338	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 + P313	IF otherwise exposed or concerned: Get medical advice/ attention.
P362 +P364	Take off contaminated clothing and wash before re-use.
P370 + P378	In case of fire: Use water spray, foam, water fog for extinction.
P391	Collect spillage.

<b>Storage Code</b>	<b>Storage Statement</b>
P405	Store locked up.
P403 + P235	Store in a well-ventilated place. Keep cool.

<b>Disposal Code</b>	<b>Disposal Statement</b>
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**

<b>Ingredients</b>	<b>Wt %</b>	<b>CAS NUMBER.</b>
Prochloraz	450g/l	67747-09-5
Xylene	30-40%	1330-20-7
Benzenesulfonic acid, dodecyl-, calcium salt	<10%	26264-06-2
Diethylene glycol	<10%	111-46-6

### **Section 4. First Aid Measures**

Routes of Exposure:

If in Eyes                      Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15 minutes or until the product is removed, while holding the eyelid(s) open. Immediately call a POISON CENTER or doctor/physician.

If on Skin	Remove contaminated clothing and wash before reuse. Wash away remainder with water and soap followed by a warm water rinse. If skin irritation occurs: Get medical advice/ attention.
If Swallowed	If swallowed, do NOT induce vomiting. Wash out mouth thoroughly with water. Never give anything to the mouth of an unconscious person. If vomiting occurs, place victim face downwards, with the head turned to the side and lower than the hips to prevent vomit entering the lungs. Call a POISON CENTER or doctor/physician if needed.
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. Apply artificial respiration if not breathing. Get medical advice if breathing becomes difficult.

**Most important symptoms and effects, both acute and delayed**

**Symptoms:**

<b>Ingestion:</b>	Harmful if swallowed.
<b>Inhalation:</b>	Harmful if inhaled.
<b>Skin:</b>	Harmful if in contact with skin.
<b>Eye:</b>	Causes serious eye damage.
<b>Chronic:</b>	Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.

**Section 5. Fire Fighting Measures**

<b>Hazard Type</b>	Flammable liquid
<b>Hazards from combustion products</b>	carbon dioxide, carbon monoxide, chlorides, nitrogen oxides.
<b>Suitable Extinguishing media</b>	Water spray, foam, water fog.
<b>Precautions for firefighters and special protective clothing</b>	Self-contained breathing apparatus and total protection required in enclosed areas.
<b>HAZCHEM CODE</b>	<b>3Z</b>

**Section 6. Accidental Release Measures**

Wear appropriate protective clothing. (see section 8). Evacuate all unnecessary personnel.

**Environmental precautions**

In the event of a major spill, prevent spillage from entering into drains and water courses.

**Methods and material for containment and cleaning up**

Collect and contain as much free liquid as possible. Absorb remainder in sand or other inert material. Place into a clean container and cover the container loosely for later disposal. Dispose as per Section 15.

**Section 7. Handling and Storage**

**Precautions for Handling:**

- Read label before use.
- Do not handle until all safety precautions have been read and understood.
- Keep away from heat, sparks, open flames or hot surfaces. No smoking.
- Keep container tightly closed.
- Take precautionary measures against static discharge.
- Avoid contact with skin and eyes.

- Do not breathe fumes, vapours or spray.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Use only outdoors or in a well-ventilated area.
- Avoid unintended release into the environment.
- Wear protective clothing as detailed in Section 8.
- Collect spillages

#### Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Store locked up.
- Store in a well-ventilated place. Keep cool.
- Store in the original, unopened container in a cool, dry place, out of direct sunlight and away from stockfeed or foodstuffs. (<50°C)
- As a substance with Ecotoxicity Classifications storage of Mirage 450 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.

### Section 8 Exposure Controls / Personal Protection

#### WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA		STEL	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Xylene [1330-20-7]	50	217		
Diethylene glycol [111-46-6]	23	101		

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.

#### Engineering Controls

Ventilation required.

#### Personal Protection Equipment



<b>Eyes</b>	Safety goggles or face shield.
<b>Hands and Skin</b>	Wear chemical resistant gloves, protective clothing and boots.
<b>Respiratory</b>	During spraying wear suitable respiratory equipment
<b>General</b>	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

<b>Appearance</b>	Clear amber liquid
<b>Odour</b>	Characteristic
<b>Odour Threshold</b>	Not applicable
<b>pH</b>	Not applicable
<b>Boiling Point</b>	Not applicable
<b>Melting Point</b>	No specific data.
<b>Flash Point</b>	<60°C (closed cup)
<b>Flammability</b>	Flammable
<b>Upper and Lower Exposure Limits</b>	Not applicable

<b>Vapour Pressure</b>	4.5X (10) <sup>-5</sup> Pa at a temperature at 25°C (pure)
<b>Specific Gravity</b>	(H <sub>2</sub> O = 1) 1.13 - 1.14
<b>Solubilities</b>	Emulsifiable - Prochloraz 25 ppm at a temperature of 20 °C (pure)
<b>Log P octanol</b>	log Pow = 4.06
<b>Auto-ignition Temperature</b>	Not applicable
<b>Kinematic viscosity mm<sup>2</sup>/s 40 °C</b>	Not applicable
<b>Particle Characteristics</b>	Not applicable
<b>Volatiles</b>	No specific data.
<b>Molecular weight</b>	376.7

### Section 10. Stability and Reactivity

<b>Stability of Substance</b>	This product is stable under normal conditions.
<b>Reactivity</b>	None known.
<b>Conditions to Avoid</b>	(sun) light, open place, sources of heat. Decomposes upon heating.
<b>Incompatible Materials</b>	Avoid contact with: strong bases and strong acids.
<b>Hazardous Decomposition Products</b>	Carbon dioxide, carbon monoxide, nitrogen oxides, chlorides.

### Section 11 Toxicological Information

#### Acute Effects:

<b>Swallowed</b>	Harmful if swallowed.
<b>Dermal</b>	Harmful if in contact with skin.
<b>Inhalation</b>	Harmful if inhaled.
<b>Skin</b>	Not applicable.
<b>Eye</b>	Causes serious eye damage.

#### Chronic Effects:

<b>Carcinogenicity</b>	Not applicable.
<b>Reproductive Toxicity</b>	Suspected of damaging fertility or the unborn child.
<b>Germ Cell Mutagenicity</b>	Not applicable.
<b>Aspiration</b>	Not applicable.
<b>STOT/SE</b>	Not applicable.
<b>STOT/RE</b>	May cause damage to organs through prolonged or repeated exposure.

#### Preparation

Acute toxicity - Oral:	LD50 (rat)= > 2,000 mg/kg
Acute toxicity - Dermal:	LD50 (rabbit) > 2,000 mg/kg
Acute toxicity - Inhalation:	LC50 (rat) > 4.99 mg/L (4 hours)
Skin irritation:	Mildly irritating (rabbit).
Eye irritation:	Mildly irritating (rabbit).
Sensitization:	Non sensitizer (guinea pig) Maximum test
Carcinogenicity:	Prochloraz: Not carcinogenic (rat)
Mutagenicity:	Prochloraz: Not mutagenic
Reproduction toxicity:	Prochloraz: Not teratogenic in animal experiments

## Section 12. Ecotoxicological Information

HSNO Classification: Hazardous to the aquatic environment acute Category 1, Hazardous to the aquatic environment chronic Category 1, Hazardous to terrestrial vertebrates.

### Ecological effects information:

96 H-LC50 –	Rainbow trout	3.05 mg/l
48 H-EC50 –	Daphnia magna	4.00 mg/l
72 H-EbC50 –	Algae	1.42 mg/l
72 h-Erc50 –	Algae	4.34 mg/l
LD50 Birds [mg/l]	Prochloraz Technical:	>2000
Bees LD50 {µ/Bee}	Prochloraz Technical:	Not toxic to bees

<b>Persistence and degradability</b>	Rapidly degrades when exposed to sunlight and UV light
<b>Bioaccumulation</b>	No data available
<b>Mobility in Soil</b>	Product does not leach to ground water
<b>Other adverse effects</b>	No data available
<b>Precautions</b>	Do not allow to enter waterways.

## 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:	1993
Class-primary	3
Packing Group	III
Proper Shipping Name:	FLAMMABLE LIQUID, N.O.S

### Air Transport

UN No:	1993
Class-primary	3
Packing Group	III
Proper Shipping Name:	FLAMMABLE LIQUID, N.O.S

### Marine Transport

UN No:	1993
Class-primary	3
Packing Group	III

Product Name: Mirage 450 Fungicide  
Date of SDS: 22 November 2021

Issued by: ADAMA New Zealand Ltd  
Tel: 64 3 543 8275

www.adama.com

**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**

**EPA Approval Code:** HSR000599

**HSNO Classification:** Flammable liquid Category 3, Acute oral toxicity Category 4, Acute dermal toxicity Category 4, Acute inhalation toxicity Category 4, Serious eye damage Category 1, Reproductive toxicity Category 2, 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 terrestrial vertebrates.

<b>HSW (HS) Regulations 2017</b>	<b>Trigger Quantity/Regulation</b>
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.
Location Certificate	500 L if >5 L (open) 1500 L if ≤ 5 L (open) >250 L (open)
Signage Trigger Quantities (Schedule 3)	100L
Fire Extinguishers (Schedule 4)	500L – 2x required
Emergency Response Plan (Schedule 5)	100L
Secondary Containment (Schedule 5)	100L
Tracking (Schedule 26)	Not required
<b>Hazardous Property Controls Notice 2017</b>	
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
<b>ACVM Act and Regulations</b>	
Registered pursuant to the ACVM Act 1997, See <a href="http://www.foodsafety.govt.nz">www.foodsafety.govt.nz</a> for registration controls	P007240

**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 2017.
LC50 inhaling or ingesting it.	Lethal concentration that will kill 50% of the test organisms
LD50	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
TEL	Tolerable Exposure Limit.
TLV authority.	Threshold Limit Value-an exposure limit set by responsible
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:**

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.

Issue Date: 22 November 2021

Review Date: 22 November 2026