SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product:	**DIVINO 250 EC FUNGICIDE**
Chemical name of active	Difenoconazole: C19H17C12N303
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:	3 September 2018

Section 2. Hazards Identification

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

EPA Approval No: HSR100519

Pictograms

Chronic Corrosive Ecotoxic

Signal Word: **DANGER**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.1E (oral)	H303	May be harmful if swallowed.	Acute Tox. 5
6.1E (inh)	H333	May be harmful if inhaled.	Acute Tox. 5
6.9B	H373	May cause damage to organs through prolonged or repeated exposure.	STOT RE 2
8.3A	H318	Causes serious eye damage.	Eye Corr. 1
9.1B	H411	Toxic to aquatic life with long lasting effects.	Aquatic Chronic 2
9.3C	H433	Harmful to terrestrial vertebrates.	-

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P260	Do not breathe fumes, vapours and spray.
P273	Avoid release to 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.
P310	Immediately call a POISON CENTER or doctor/physician.
P391	Collect spillage.
P304 + P312	IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage Code	Storage Statement
None allocated	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 Class 9 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.

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.
Difenoconazole	250g/L	119446-68-3
Solvesso 200	>60%	64742-94-5
C11 Alcohol ethoxylate, 5EO	<6%	34398-01-1
CaABS/alkylaryl sulfonate	<5%	-

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes — Rinse cautiously with water for several 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. If skin irritation or rash occurs: Get medical advice/attention.

If Swallowed — Wash out mouth with plenty of water. Get medical attention. 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: May be harmful if swallowed.
Skin: Not applicable
Inhalation: May be harmful if inhaled.
Eyes: Causes severe eye damage.

Chronic: May cause damage to organs through prolonged or repeated exposure.

Notes to physician: There is no specific antidote. Treat symptomatically and give supportive therapy.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable.
Hazardous thermal (de)composition products	Thermal decomposition generates: carbon dioxide, carbon monoxide, nitrogen oxides, chlorides.
Suitable Extinguishing media	For small fire: carbon dioxide, dry chemical. For large fire: Water spray, water fog, foam.
Precautions for firefighters and special protective clothing	Do not enter fire without proper protective equipment, including respiratory protection. Self-contained breathing apparatus and total protection required in enclosed areas.
HAZCHEM CODE	**3Z**

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
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose of according to Local Regulations.

Section 7. Handling and Storage

Precautions for Handling:
- Read label before use.
- Do not breathe fumes, vapours and spray.
- Avoid release to 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.
- 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 Class 9 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 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.

Personal Protection Equipment

Eyes	Safety goggles or face shield.
Hands and Skin	Wear chemical resistant gloves, suitable protective closing and boots.
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	Clear yellowish Liquid
Odour	Not known
Odour Threshold	Not applicable
pH	4.0 – 7.0
Boiling Point	Not applicable
Melting Point	Not applicable
Flash Point	$>100^0$C
Flammability	Not applicable
Upper and Lower Exposure Limits	Not applicable
Vapour Pressure	Not applicable
Density	1.07 -1.09 g/mL
Bulk Density	Not applicable
Relative Density	Not applicable
Solubility in water	Not applicable
Auto-ignition Temperature	Not applicable
Log P octanol	Difenoconazole: 4.4 (25 ºC)
Molecular weight	Difenoconazole: 406.3

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Conditions to Avoid	Direct sunlight, sources of heat, open flame. Decomposes upon heating.
Incompatible Materials	None known.
Hazardous Decomposition Products	Thermal decomposition generates: carbon dioxide, carbon monoxide, nitrogen oxides, chlorides.

Section 11 Toxicological Information

Acute Effects:

Swallowed	May be harmful if swallowed. LD50 (rat)= >2000 mg/kg

Dermal	Not applicable = LD50 (rat) >2000 mg/kg
Inhalation	Not applicable = LC50 (rat) > 1.75 mg/L (4 hours)
Eye	Causes serious eye damage.
Skin	Not applicable.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	May cause damage to organs through prolonged or repeated exposure.

Section 12. Ecotoxicological Information

HSNO Classes: 9.1B = Toxic to aquatic life with long lasting effects.
9.3C = Harmful to terrestrial vertebrates.

Persistence and degradability	No data available
Bioaccumulation	No data available
Mobility in Soil	No data available
Other adverse effects	No data available

Aquatic Toxicity- Product
96 H-LC50 – Rainbow trout 0.39 mg/l
LD50 Birds [mg/l] Technical: >2000
Bees LD50 {µ/Bee] >100

Do not allow to enter waterways.

Section 13. Disposal Considerations

Disposal Method: Dispose of this product only by using according to the label or at an approved landfill. Container Disposal: Triple rinse container and add rinsate to spray tank. Dispose of container in a suitable landfill or take to an Agrecovery collection site. Do not use container for any other purpose

Precautions: Do not allow product to enter waterways.

Disposal methods to avoid: DO NOT reuse this container for any other purpose.

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, N.O.S. (Difenoconazole)

Air Transport

UN No:	3082
Class-primary	9
Packing Group	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Difenoconazole)

Marine Transport

UN No:	3082
Class-primary	9
Packing Group	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Difenoconazole)
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

EPA Approval Code: HSR100519
HSNO Classification: 6.1E(oral, inh), 6.9B, 8.3A, 9.1B, 9.3C

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	1000L(9.1B)
Emergency Response Plan	1000L(9.1B)
Secondary Containment	1000L(9.1B)
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
ACVM Act and Regulations	
Registered pursuant to the ACVM Act 1997, See www.foodsafety.govt.nz for registration conditions	No. P8328
For all further controls	Refer to EPA website (www.epa.govt.nz) for controls document - HSR100519

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.

Issue Date: 3 September 2018 Review Date: 3 September 2023