



SAFETY DATA SHEET DEFINE® 725 WG FUNGICIDE

Section 1: Identification of the Substance and Supplier

Product name: DEFINE® 725 WG FUNGICIDE
Chemical name of active Ingredient(s): 5,10-dihydro-5,10-dioxonaphtho[2,3-b]-1,4-dithiine-2,3-dicarbonitrile
Supplier: ADAMA New Zealand Limited
Level1/19 Elms Street, Wakatu Estate, Stoke, Nelson, New Zealand
P.O. Box 1799, Nelson New Zealand.
+64 3 543 8275 Fax: +64 3 543 8274
Telephone
Emergency Telephone: 0800 POISON (0800 764 766) 24 Hour Service

Section 2: Hazards Identification

Hazard Classifications 6.1C, 6.5B, 6.9A, 8.3A, 9.1A, 9.3B



APPROVED HANDLER: This product must be under the control of an approved handler during use.

TRACKING: This product must be tracked – see current version of NZS8409 Management of Agrichemicals.

RECORD KEEPING: Records of use must be kept as described in NZS8409 Management of Agrichemicals.

WARNING

TOXIC. This substance may be toxic if swallowed, inhaled or absorbed through the skin. May cause eye irritation. May cause sensitisation from prolonged skin contact. May cause kidney damage from repeated oral exposure at high doses.

ECOTOXICITY

Very toxic to aquatic life. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. Avoid contamination of any water supply with product or empty container.

Section 3. Composition/Information on Ingredients

Information on hazardous ingredients *

CAS Number	% wt/wt	Component Name
3347-22-6	72.5	dithianon
---	27.5	surfactants & inert

* Occupational Exposure Limit(s), if available, are listed in section 8



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Section 4: First-Aid Measures

Inhalation	Remove affected person to fresh air until recovered. If symptoms develop or persist, seek medical advice.
Ingestion	Rinse mouth and then drink plenty of water. If swallowed do NOT induce vomiting; seek medical advice immediately and show this container or label or contact the NZ Poisons Information Centre on 0800 764 766. Make every effort to prevent vomit from entering the lungs by careful placement of the patient.
Skin	Wash affected areas thoroughly with soap and water. Remove contaminated clothing and launder before re-use.
Eye	If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes. Seek medical advice immediately.
Advice to Doctor	Treat symptomatically.

Section 5: Fire-Fighting Measures

Suitable:	Water fog, foam, carbon dioxide or dry chemical.
Extinguishing Media:	Avoid strong water jets - airborne dusts may form a flammable dust cloud.
Hazards from Combustion Products:	If involved in a major fire, could evolve oxides of carbon, nitrogen or sulphur.
Special Protective Equipment for fire Fighters:	Breathable air apparatus may have to be worn if material is involved in fires especially in confined spaces.
Specific Hazards:	This product contains a high proportion of an organic solid. Large accumulations of dust and fines associated with industrial processing of bulk material may be a dust explosion hazard.
Hazchem Code:	2X
Other Information:	STOP FIRE WATER FROM ENTERING DRAINS OR WATER BODIES

Section 6: Accidental Release Measures

Spills & Disposal:	Recover the product by sweeping up or vacuuming without raising dust. Collect spilled material and waste in sealable open-top type containers for disposal. On-site disposal of concentrate is not acceptable.
Personal Protection:	For appropriate personal protective equipment (PPE), refer Section 8.



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Section 7: Handling and Storage

HANDLING PRECAUTIONS:

Keep out of reach of children. Do not eat, drink or smoke while using.

Equipment:

Apply using accurately calibrated and maintained ground based equipment in accordance with The New Zealand Standard for the Management of Agrichemicals (NZS8409).

Storage:

Store in the original, unopened container in a cool, dry place, out of direct sunlight and away from Stock feed and foodstuffs.

As a Class 9 Substance with Ecotoxicity Classifications, storage of DEFINE 725 WG 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.

Protective Clothing

When mixing or applying wear appropriate protective clothing including cotton overalls buttoned to the Neck and wrist, a washable hat, elbow length gloves and safety goggles.

Remove protective clothing and wash hands, arms and face with soap and water before meals and after work.

General Safety and Hygiene Measures

Avoid contact with skin, eyes and clothing, and inhalation of spray mist. DO NOT eat, drink or smoke While using this product.

Remove protective clothing and wash hands and exposed skin thoroughly with soap and water before meals and after work. Wash protective clothing immediately after use. Store work clothing separately

Section 8: Exposure Controls/Personal Protection

Engineering Controls:	Handle in well ventilated areas, generally natural ventilation is adequate. Avoid generating and inhaling dusts.
Respiratory Protection:	If dusts are present, wear a class P1 dust mask.
Personal Protective Equipment:	When opening the container, preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and goggles.
Hygiene Measures:	After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash contaminated clothing and safety equipment.

Section 9: Physical and Chemical Properties

Physical state:	Solid
Colour:	Brown extrusion granules
Melting Point:	217°C for dithianon
Bulk density (tapped):	0.6
Vapour pressure:	2.7×10^{-6} @ 20°C for dithianon
Solubility in water:	Disperses in water



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Octanol/water partition $K_{ow \log P} = 3.2$
pH Value: 4.9 (101% w/v suspension)
Coefficient
Flammability: Not flammable - May form dust clouds

Section 10: Stability and Reactivity

Stability: Stable at temperatures below 80 °C
Materials to avoid: Avoid contact of concentrate with strong alkali and alkaline materials, such as lime, lime sulphur and Bordeaux mixtures.
Hazardous reactions: Hazardous polymerization will not occur.

Section 11: Toxicological Information

Inhalation Inhalation of dusts or aerosols may result in effects described under ingestion.
Ingestion Possible symptoms of exposure include: lethargy, shortness of breath, diarrhoea, motor weakness and incoordination.

Skin May irritate the skin.
Prolonged or repeated exposure may cause skin sensitisation.

Eye The concentrate will cause severe irritation and possible damage unless washed off immediately.

Chronic Effects Chronic Overexposure: Weight loss and damage to liver and kidneys may be expected if exposure is excessive.

Reproductive Toxicity Data indicates no teratogenic effects.

Carcinogenicity The weight of the evidence is that dithianon is not carcinogenic.

Acute Toxicity - Oral LD₅₀ (rat) (female, male) 273 - 520 mg/kg for the formulated product

Acute Toxicity - Dermal LD₅₀ (rat) >4000 mg/kg for the formulated product

Acute Toxicity - Inhalation LC₅₀ (rat) (4hr) 0.33 mg/l for dithianon

Eye Irritation Severe irritant

Skin Irritation Not a skin irritant.

Skin Sensitisation Product is a skin sensitiser.

Section 12: Ecological Information

Known Harmful Effects on the Environment: The product is a marine pollutant for sea transport.
Harmful to fish.

Other Precautions Do not contaminate streams, rivers or waterways with the chemical or used containers.

Acute Toxicity - LC₅₀ (96hr) for rainbow trout is 0.016 mg/l for the formulated product



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Acute Toxicity -	LC ₅₀ (48hr) for daphnia is 0.110 mg/l for the formulated product.
Acute Toxicity -	Algae EC ₅₀ for <i>Selenastrum capricornutum</i> is 0.064 mg/l
Acute Toxicity -	Bees: Not toxic to bees, LD ₅₀ > 100µg/bee.
Other Organisms	LD ₅₀ for female quail is 290 mg/kg for Dithianon

Section 13: Disposal Considerations

Ensure container is empty. Triple rinse empty container and add rinsate to spray tank. Recycle empty container through Agrecovery (0800 247 326, www.agrecovery.co.nz). Otherwise crush or puncture and bury in a suitable landfill. DO NOT reuse this container for any other purpose.

Section 14: Transport Information

UN Number	3077
Proper shipping name	Environmentally hazardous substance, Solid, N.O.S, (Dithianon)
DG Class	9
Packing Group	III
Hazchem Code	2X
Marine Pollutant	YES
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National transport regulations: Do not carry this product on a passenger service vehicle.

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

New Zealand Regulatory Information:

NZFSA Approval: Registered pursuant to the ACVM Act 1997. No P8764.
See www.foodsafety.govt.nz for registration conditions.

Approved pursuant to the HSNO Act 1996, Approval No. HSR100837
See www.epa.govt.nz for approval controls

HSNO Classifications: 6.1C, 6.5B, 6.9A, 8.3A, 9.1A, 9.3B



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RECORD KEEPING: Records of use must be kept as described in NZS8409 Management of Agrichemicals.

Section 16: Other Information

Note: This product is a registered agricultural chemical and must be therefore be used in accordance with the container label directions. A comprehensive package of toxicological and environmental data for the active ingredients of this product has been submitted to the Government health and environment authorities and has been evaluated by expert toxicologists and environmental scientists.

The information contained in the Safety Data sheet is correct to the best of our knowledge at the date of issue. It is intended as a guide for the safe use, handling, disposal, storage and transportation and is not intended as a warranty or as a specification. The information relates only to the product specified and may not be suitable for combinations with other materials or in processes other than those specifically described herein.

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