

SAFETY DATA SHEET

According to HSNO Hazardous Substances (Safety Data Sheets) Notice 2017

Section 1. Identification of the material and the supplier

Product: **Dyfen**
 Product Use: **Fungicide**
 Restriction of Use: Refer to Section 15

New Zealand Supplier: **Agrisource 2000 Ltd**
 Address: 45 Kitchener Road
 Pukekohe, Auckland

Telephone: +64 9 237 0422
Emergency No: 0800 764 766 (National Poison Centre)

Date of SDS Preparation: 17 February 2023

Section 2. Hazards Identification

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

EPA Approval No: HSR001692

Pictograms



Signal Word: **Warning**

GHS Classification and Category	Hazard Code	Hazard Statement
Flammable Liquids Cat. 4	H227	Combustible liquid.
Eye irritation Cat. 2	H319	Causes serious eye irritation.
Specific target organ toxicity – repeated exposure Cat. 2	H373	May cause damage to organs through prolonged or repeated exposure.
Hazardous to the aquatic environment chronic Cat. 2	H411	Toxic to aquatic life with long lasting effects.

Prevention Code	Prevention Statement
P103	Read carefully and follow all instructions.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe dust, fumes, gas, mist, vapours or spray.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective clothing as detailed in Section 8.

Response Code	Response Statement
P314	Get medical advice/attention if you feel unwell.
P391	Collect spillage.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P370 + P378	In case of fire: Use water spray, Dry extinguishing media, carbon dioxide to extinguish.

Storage Code	Storage Statement
P403 + P235	Store in a well-ventilated place. Keep cool.

Disposal Code	Disposal Statement
P501	Dispose of according to Local Regulations or Authorities

Section 3. Composition / Information on Hazardous Ingredients

Ingredients	Wt%	CAS NUMBER.
Difenoconazole	25%	119446-68-83
Aromatic Hydrocarbon	40-60%	64742-94-5

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention.
If on Skin	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
If Swallowed	Rinse mouth. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.
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:	This product may be harmful if a large amount is swallowed and may cause liver damage. May irritate eyes. May irritate skin. The dermal toxicity of this product is low. However, skin contact should be avoided. This product is not a skin sensitiser. May be a slight respiratory irritant.
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Section 5. Fire Fighting Measures

Hazard Type	This product is non-flammable. Combustible product at elevated temperatures.
Hazards from combustion products	Carbon dioxide. Carbon monoxide. Nitrogen oxides. Halogens.
Suitable Extinguishing media	Water spray, Dry extinguishing media, carbon dioxide.
Precautions for firefighters and special protective clothing	Wear protective clothing and self-contained breathing apparatus. Do not breath smoke or gases.
HAZCHEM CODE	3Z

Section 6. Accidental Release Measures

Avoid contact with skin and eyes. Do not inhale spray. Wear long sleeved shirt, long pants, waterproof gloves and safety goggles or face shield. Do not eat, drink or smoke when using. Wash hands and face before meals and after work.

Do NOT allow spilled product or wash solution to enter sewers, drains, dams, creeks or any other waterways.

In the case of spillage, contain spilled material. Keep out animals and unprotected persons. Keep material out of streams and sewers. Vacuum or shovel waste into a drum. To decontaminate spill area, tools and equipment, wash with water. Dispose of contained wastes in accordance with the requirements of Local Authorities.

Section 7. Handling and Storage**Precautions for Handling:**

- Read carefully and follow all instructions.
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Do not breathe dust, fumes, gas, mist, vapours or spray.
- Avoid release to the environment.
- When mixing or applying, avoid breathing dust and contact with skin and eyes.
- Wear protective clothing, gloves and goggles as detailed in Section 8.
- Do not eat or drink while using.
- Wash hands and face before meals and after work.
- Wash protective clothing after work.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Store in original container tightly closed and in a locked, dry, cool, well-ventilated area, away from feed, seeds and foodstuffs.
- Keep out of reach of children.
- Store in accordance with the New Zealand Standard for the Management of Agrichemicals (NZS8409).

Section 8. Exposure Controls / Personal Protection**WORKPLACE EXPOSURE STANDARDS (provided for guidance only)**

Substance	TWA		STEL	
	ppm	mg/m ³	ppm	mg/m ³

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 APRIL 2022 13TH EDITION.

Engineering Controls

Ensure ventilation is adequate, as product is used outdoors generally natural ventilation is adequate.

Personal Protection Equipment



Eyes	Wear chemical goggles or face shield.
Skin	Wear elbow-length and PVC gloves. When opening the container, preparing spray and using prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat.
Respiratory	Where insufficient ventilation, use suitable respiratory protection.
General Hygiene	Avoid inhaling aerosols and vapours. Avoid contact with eyes and skin. Store work clothes and street clothes separately. Wash hand before breaks and at the end of work. Change contaminated protective clothing. Keep away from food, drinks and tobacco.

Section 9. Physical and Chemical Properties

Appearance	Liquid
Colour	Amber
Odour	Aromatic
Odour Threshold	Not available
pH	9.0 – 10.0
Boiling Point	Decomposes > 90° C
Melting /Freezing Point	May start to solidify at 0°C
Flash Point	Not available
Flammability	Not flammable
Upper and Lower Explosive Limits	Not available
Vapour Pressure (kPa)	Not available
Vapour Density	Not available
Specific Gravity or Density	Approx. 1.05 g/L (20°C)
Solubility	Emulsifiable
Octanol/water partition coefficient:	Slightly soluble in n-octanol.
Auto-ignition Temperature	Not available
Decomposition Temperature	> 90° C
Kinematic Viscosity	Not available
Octanol/Water Particle Coefficient	Not available

Section 10. Stability and Reactivity

Stability of Substance	Stable under normal conditions of use.
Possibility of hazardous reactions	None expected.
Conditions to Avoid	Extreme heat or Cold.
Incompatible Materials	Strong oxidizers, acids, alkalis, reducing agents.
Hazardous Decomposition Products	May include nitrogen and Carbon dioxides, hydrogen chloride gas.

Section 11. Toxicological Information**Acute Effects:**

Swallowed	Not applicable.
Dermal	Not applicable.
Inhalation	Not applicable.
Eye	Causes serious eye irritation.
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.

Toxicological Effects:

Acute toxicity – Oral :	LD ₅₀ > 3400 mg/kg (rat)
Acute toxicity - Dermal :	LD ₅₀ > 2000 mg/kg (rat)
Acute toxicity – Inhalation	LC ₅₀ >3300 mg/l (rat/4hr/ai)

Section 12. Ecotoxicological Information

Toxic to aquatic life with long lasting effects.

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

Data for technical active ingredient:

Fish toxicity:	LC ₅₀ (96hr) = 0.81mg/L (rainbow trout), 1.2 mg/L (bluegill sunfish)
Daphnia toxicity:	LC ₅₀ (48 hr) = 0.77mg/L daphnia magna
Algae toxicity:	EC ₅₀ = 0.032 – 1.2mg/L
Bird toxicity:	LD ₅₀ = >2000mg/kg (mallard duck) LD ₅₀ = >4700mg/kg (bobwhite quail)
Bee toxicity:	LD ₅₀ = >187 ug/bee (oral), LD ₅₀ >100 ug/bee (topical)
Earthworm toxicity:	LC ₅₀ = >610mg/kg

Do not allow to enter waterways.

Section 13. Disposal Considerations

Disposal Method:

Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, follow the recommendations in NZS 8409.

Container Disposal: Triple rinse container and add rinsate to spray tank. Dispose of cleaned container at your local AGRECOVERY container collection site.

Precautions or methods to avoid: Avoid release to the environment.

Section 14. Transport Information

This product is classified as a Dangerous Good for transport in NZ; NZS 5433:2012



Road, Rail, Sea and Air Transport

UN No	3082
Class - Primary	9
Packing Group	III
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (difenaconazole)
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 EPA Hazardous Substances (Classification) Notice 2020

EPA Approval No: HSR001692

HSW (HS) Regulations 2017	Trigger Quantity
Signage Trigger Quantities (Schedule 3)	1000L
Emergency Response Plan (Schedule 5)	1000L
Secondary Containment (Schedule 5)	1000L
Tracking (Schedule 26)	Not required
Certified Handlers	Not required
Location Certificate	Not required
Restrictions of use	Refer to EPA website for full control details www.epa.govt.co.nz
ACVM Registration Number (See www.foodsafety.govt.nz for registration Conditions).	P8342

Glossary

EC ₅₀	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC ₅₀	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD ₅₀	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 APRIL 2022 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2020
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer

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Please contact the Agrisource 2000 Ltd, if further information is required.

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