

Infosafe No™ 3NV3V	Issue Date : October 2019	ISSUED by NUFARM
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 Product Name **DIGGER EW**

1. Identification

GHS Product Identifier	DIGGER EW
Product Type	Fungicide
Company Name	Nufarm NZ
Address	6 Manu Street, Otahuhu Auckland 2024 New Zealand
Telephone/Fax Number	Tel: 0-9-270 4150
Emergency phone number	0800 651 911
Email	nzinfo@nufarm.com
Recommended use of the chemical and restrictions on use	A triazole (DMI) fungicide for the control of powdery mildew on grapes.
Other Information	This SDS describes, to the best of our knowledge, the properties of the concentrated product. The physical properties and some of the assessments do not apply to the properties of the product once it has been diluted for application. Acute health effects of the diluted product are likely to be much less severe.

2. Hazard Identification

Signal Word (s)	DANGER
Hazard Statement (s)	H227 Combustible liquid H304 May be fatal if swallowed and enters airways. H371 May cause damage to organs. H411 Toxic to aquatic life with long lasting effects.
General Precautionary Statement (s)	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P103 Read label before use.
Pictogram (s)	Exclamation mark, Health hazard, Environment,



Precautionary statement – Prevention	P210 Keep away from open flames and sources of ignition. P260 Do not breathe mist, vapours or spray. P264 Wash hands and face thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P280 Wear protective gloves, protective clothing, face and eye protection.
Precautionary statement – Response	P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P309+P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician. P331 Do NOT induce vomiting. P370+P378 In case of fire: Use dry chemical, carbon dioxide, water spray, fog or foam for extinction. P391 Collect spillage.
Precautionary statement – Storage	P403+P235 Store in a well-ventilated place. Keep cool.
Precautionary statement – Disposal	P405 Store locked up. P501 Dispose of contents only by using according to the label, or at an approved landfill. Do not burn.
Other Information	3.1D flammable liquid, 6.1E acute toxicant, 6.9B target organ toxicant, 9.1B aquatic toxicant,

3. Composition/information on ingredients

Chemical Characterization	Liquid		
Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>

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Difenoconazole	119446-68-3	125 g/L
Hydrocarbon solvent	64792-94-5	180 g/L
Other Ingredients		Balance

4. First-aid measures

First Aid Measures For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor immediately. Begin artificial respiration if the victim is not breathing. Use mouth-to-nose rather than mouth-to-mouth. Obtain medical attention.

Inhalation Remove patient to fresh air. Lay down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear and apply resuscitation. Seek medical assistance immediately.

Ingestion Never give anything by mouth to an unconscious person. If swallowed do NOT induce vomiting. For advice, contact the National Poisons Centre (0800 764 766). Seek medical assistance immediately.

Skin Immediately flush body and clothes with large amounts of water. Remove contaminated clothing and footwear. Wash affected areas with soap and water. If a large area is affected seek medical assistance. Do not scrub the skin.

Eye contact Flush eyes with plenty of water for 15 minutes, holding eyelids open if necessary. Remove contact lenses if present and easy to do so. Seek medical assistance.

First Aid Facilities Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.

Advice to Doctor Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media Alcohol resistant foam, water spray or fog
Dry chemical powder Carbon dioxide

Unsuitable Extinguishing Media Do not use a high volume water jet or a solid water stream to extinguish, as this will spread the fire.

Hazards from Combustion Products If involved in a fire, may emit toxic fumes, smoke and hazardous gases including hydrogen chloride, carbon monoxide and dioxide, oxides of carbon, nitrogen and incomplete combustion products.

Special Protective Equipment for fire fighters Full protective clothing and self-contained breathing apparatus.

Specific Methods Keep up wind. Do not allow washings to reach sewage or effluent systems. Keep containers cool with water spray.

Hazchem Code 2Z

Decomposition Temp. Data not available.

Other Information Location certificate: Not applicable.
Hazardous Atmosphere Zone: Not applicable.
Number of fire extinguishers: 2 for 500L or more.

6. Accidental release measures

Spills & Disposal Wear protective clothing. Clear area of unprotected personnel. Contain spill and absorb with sand, soil or absorbent granules. If spill does enter waterways contact the local authority. Collect in an appropriate sealable container for disposal in an approved landfill. Wash area with water and absorb with further inert material. Dispose of waste safely in an approved landfill.

Personal Protection For appropriate personal protective equipment (PPE), refer Section 8.

Environmental Precautions Prevent from entering drains, waterways or sewers.

7. Handling and storage

Precautions for Safe Handling Avoid skin and eye contact and inhalation of spray mist.
CERTIFIED HANDLER: Not applicable.
It is the duty of the PCBU that a person who uses, handles, manufactures or stores DIGGER EW (including hazardous waste) is provided information, instruction and training in accordance with Regulation 4.5 of the Health and Safety at work (Hazardous Substances) Regulations 2017.
TRACKING: Is not required.

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Conditions for safe storage, including any incompatibilities RECORD KEEPING: Is not required.
Keep out of reach of children. Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs. Storage must be in accordance with NZS 8409 Management of Agrichemicals.
Stores containing 1000L of DIGGER EW require secondary containment and are subject to signage, and more than 1000L require emergency response plans.

Other Information Aggregate Storage Volume Thresholds:
When stored with substances of the same hazard classification the aggregate quantity must be considered. For full details refer to the current NZS8409 Management of Agrichemicals and the HSNO Regulations.

8. Exposure controls/personal protection

Occupational exposure limit values No exposure limits (WES, TEL or EEL's) have been specifically assigned for this product.
However product contains solvent components with the following WES TWA exposure limits:
Heavy aromatic hydrocarbon TWA: 15ppm

Appropriate engineering controls Handle in well ventilated areas, particularly if handling in confined spaces.
Generally natural ventilation is adequate.
Avoid skin and eye contact and inhalation of spray mist.

Personal Protective Equipment When mixing or applying wear face and eye protection, impervious gloves, boots and overalls.

Hygiene Measures Do not eat, drink or smoke while using.
Remove protective clothing and wash hands and face thoroughly before meals and after work. Wash splashes of concentrate from skin immediately. Wash protective clothing daily after work.

9. Physical and chemical properties

Form Liquid

Appearance White to off-white

Odour Characteristic solvent odour

Decomposition Temperature Data not available.

Freezing Point Data not available.

Boiling Point Data not available.

Solubility in Water Miscible, forms an emulsion in water

Specific Gravity 1.026g/mL

pH 4.0-7.0 (1% dilution)

Vapour Pressure 3.3×10^{-5} mPa @ 25°C (difenoconazole)

Vapour Density (Air=1) Data not available.

Partition Coefficient: n-octanol/water LogP Kow = 4.4 @ 25°C (difenoconazole)

Flash Point 81°C (closed cup)

Flammability Flammable.

Auto-Ignition Temperature Data not available.

Kinematic Viscosity Data not available.

Other Information (EW) Emulsion, oil in water

10. Stability and reactivity

Chemical Stability Stable under normal conditions of handling and storage.

Conditions to Avoid Excessive heat and open flames which might induce thermal decomposition.

Incompatible Materials Strong oxidizing agents. Strong acids.
Reducing agents.

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Hazardous Decomposition Products	On thermal decomposition, may emit toxic fumes, smoke and hazardous gases including hydrogen chloride, carbon monoxide and dioxide, oxides of carbon, nitrogen and incomplete combustion products.
Hazardous Polymerization	Not known to occur.

11. Toxicological Information

Toxicology Information	No specific toxicological data is available for this product. Data below is for constituents unless otherwise stated.
Acute Toxicity - Oral	LD50 (rat) 1453mg/kg for difenoconazole LD50 (mice) >2000mg/kg for difenoconazole LD50 (rabbit) >2010mg/kg for difenoconazole
Acute Toxicity - Dermal	
Acute Toxicity - Inhalation	LC50 (rat, 4hr) >3.3mg/L for difenoconazole
Ingestion	Harmful if swallowed.
Inhalation	Prolonged inhalation may be harmful.
Skin	Not a skin irritant
Eye	Information not available.
Skin Sensitisation	Not a skin sensitizer.
Germ cell mutagenicity	Information not available.
Carcinogenicity	Information not available.
Reproductive Toxicity	Information not available.
STOT-repeated exposure	Target organ toxicant.
Aspiration Hazard	Information not available.
Mutagenicity	Not expected to be mutagenic.
Respiratory Irritation	Not a respiratory irritant.
Skin corrosion/irritation	Not a skin irritant.
Subchronic/Chronic Toxicity	NOEL (2yrs) for rats: 1.0mg/kg/bw daily for difenoconazole NOEL (1.5yrs) for mice: 4.7mg/kg/bw daily for difenoconazole NOEL (1yr) for dogs: 3.4mg/kg/bw daily for difenoconazole Target: liver, heart, thyroid and kidneys
Other Information	The Australian Acceptable Daily Intake (ADI) for difenoconazole for a human is 0.01 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 1 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Aust Govt Dept. of Health, Office of Chemical Safety, 'ADI List', 31st Dec 2014).

12. Ecological information

Persistence and degradability	Difenoconazole is considered persistent in the aquatic environment (DT50 (whole system) >2 months and the soil environment (upper 80% DT50 192.8 days) In animals after oral administration, difenoconazole was rapidly eliminated practically to entirety with urine and faeces. Residue in tissues was not significant and there was no evidence for accumulation.
Mobility	Difenoconazole is practically immobile in soil.
Environmental Fate	Difenoconazole has moderate potential to bioaccumulate with a BCF of 330. Difenoconazole shows low potential for leaching due to strong adsorption to soil particles therefore is unlikely to leach below top-soil layer.
Bioaccumulative Potential	Not bioaccumulative.
Other Precautions	Do not contaminate dams, waterways or sewers with this product.
Basis for Assessment	Ecotoxicological data have not been determined specifically for this product.

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 Data below is for the active ingredient unless otherwise stated.

Acute Toxicity - Fish	LC50 (96hr) Bluegill sunfish 1.2mg/L LD50 (96hr) Rainbow trout 0.81mg/L
Acute Toxicity - Daphnia	EC50 (48hr) Daphnia magna 0.77mg/L
Acute Toxicity - Algae	EC50 (72hr) Scenedesmus subspicatus 0.032 - 1.2mg/L Chronic EC50 (14d) Duckweed, Lemna gibba 18.5mg/L
Acute Toxicity - Other Organisms	LD50 (oral) Japanese quail >2000mg/kg LD50 (oral, 9-11d) Mallard duck >2150mg/kg LD50 (dietary) Mallard duck >5000mg/kg/diet LD50 (dietary) Bobwhite quail 4760mg/kg/diet LD50 Honey Bees (oral) >187µg/bee, (contact) >100µg/bee LC50 Earthworm (14d) >610mg/kg/soil
Other Information	Other Aquatic Species: LC50 (96hr) Mysid shrimps 0.15mg/L LC50 (96hr) Eastern oysters 0.45mg/L

13. Disposal considerations

Product Disposal	Dispose of product only by using according to the label, or at an approved landfill.
Container Disposal	Triple rinse empty container and add rinsate to spray tank. Recycle empty container. Otherwise crush and bury in a suitable landfill.

14. Transport information

Transport Information	It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.
U.N. Number	3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. - (difenoconazole 12.5%)
Transport hazard class(es)	9
Hazchem Code	2Z
Packaging Method	-
Packing Group	III
Storage and Transport	This product is classified as a hazardous substance and dangerous goods for transport in New Zealand according to LSTA New Zealand.
EPG Number	-
IERG Number	35
IMO Marine Pollutant	Yes. Environmentally Hazardous Substance mark required.
EMS	F-A, S-A
Other Information	Do not carry more than 10L of DIGGER EW on a passenger service vehicle. Segregation: Check the latest Land Transport Rule Dangerous Goods Rule 45001 for additional information. Sea transport may require additional segregation. Refer NZS5433 sea segregation for details.

15. Regulatory information

National and or International Regulatory Information	Registered pursuant to the ACVM Act 1997, No. P9644 See www.foodsafety.govt.nz for registration conditions Approved pursuant to the HSNO Act 1996, Approval Code HSR101369 See www.epa.govt.nz for approval controls.
Hazard Category	WARNING - Combustible Liquid TOXIC * ECOTOXIC - keep out of reach of children

16. Other Information

Date of preparation or last revision of SDS	First issue - October 2019
Contact Person/Point	IN AN EMERGENCY, DIAL 111 - FIRE OR POLICE 24Hr Tollfree Emergency No: 0800 651 911



Safety Data Sheet

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24Hr Emergency No: National Poisons Centre Phone: 0800 764 766
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