

SAFETY DATA SHEET

Section 1: Identification: Product identifier and chemical identity

Product Identifier:	VIBRANCE® Fungicide Seed Treatment
Other Means of Identification:	Proper shipping name: Environmentally Hazardous Substance, Liquid, N.O.S. (difenoconazole) Applicable only for marine and air transport
	Product code: A16874F
Recommended Use:	Fungicide seed treatment for the control of seedling diseases
Details of manufacturer or importer	Syngenta Australia Pty Ltd ABN 33 002 933 717
Address:	Level 1, 2-4 Lyonpark Road MACQUARIE PARK NSW 2113 AUSTRALIA
Website:	syngenta.com.au
Phone Number:	(02) 8876 8444
Emergency Phone Number:	24 hours - 1800 033 111

Section 2: Hazards identification

Classification of the Hazardous Chemical:	Not classified as hazardous under GHS criteria
Signal Word:	-
Hazard Statement(s):	-
Precautionary Statement(s):	-
Hazard Symbols::	-

Section 3: Composition and information on ingredients

SUBSTANCE			
Chemical Identity of Pure Substance:	Difenoconazole	Metalaxyl-M	Sedaxane
Synonym:	CGA169374	CGA329351, Mefenoxam	SYN524464
CAS Number:	119446-68-3	70630-17-0	874967-67-6

MIXTURE		
Chemical Identity of Ingredients:	CAS No	Proportion (% w/v)
Difenoconazole	119446-68-3	6.62
Metalaxyl-M	70630-17-0	1.65
Sedaxane	874967-67-6	1.38
Non-hazardous ingredients	-	to 100

Section 4: First aid measures

Description of Necessary First Aid Measures:	<p>In case of poisoning by any exposure route contact a doctor or Poisons Information Centre on 131 126. Have the product label or SDS with you when calling or going for treatment.</p> <p>Ingestion: If swallowed, seek medical advice immediately and show this container or label. DO NOT induce vomiting.</p> <p>Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.</p> <p>Skin contact: Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a doctor. Wash contaminated clothing before re-use.</p> <p>Inhalation: Move the victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a doctor or Poisons Information Centre immediately.</p>
Symptoms Caused by Exposure:	Poisoning symptoms in laboratory animals were non-specific.
Medical Attention and Special Treatment:	There is no specific antidote available. Treat symptomatically.

Section 5: Fire fighting measures

Suitable Extinguishing Equipment:	<p>Small fires: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.</p> <p>Large fires: Alcohol resistant foam or water spray. DO NOT use a solid water stream as it may scatter and spread fire.</p>
Specific Hazards Arising from the Chemical:	As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see Section 10). Exposure to decomposition products may be a hazard to health.
Special Protective Equipment and Precautions for Fire Fighters:	Wear full protective clothing and self contained breathing apparatus. DO NOT allow runoff from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.

Section 6: Accidental release measures

Personal Precautions, Protective Equipment and Emergency Procedures:	<p>In case of spillage it is important to take all steps necessary to</p> <ul style="list-style-type: none"> • Avoid eye and skin contact • Avoid contamination of waterways • Wear full length clothing and PVC gloves • Keep all bystanders away
Environmental precautions:	Prevent further leakage or spillage if safe to do so. DO NOT flush into surface water or sanitary sewer system.

Methods and Materials for Containment and Clean Up:	<p>Procedure for spill</p> <ol style="list-style-type: none"> (1) Keep all bystanders away (2) Wear full length clothing and PVC gloves (3) Reposition any leaking containers so as to minimise further leakage (4) Dam and absorb spill with an absorbent material (eg sand or soil) (5) Shovel the absorbed spill into drums (6) Disposal of the absorbed material will depend upon the extent of the spill <ul style="list-style-type: none"> • For quantities up to 50 L of product bury in a secure landfill site • For quantities greater than 50 L seek advice from the manufacturer (use emergency contact number below) before attempting disposal. Contain in a secure location until disposal method is established (7) Decontaminate spill area with detergent and water and rinse with the smallest volume of water practicable
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Section 7: Handling and storage

Precautions for Safe Handling:	<p>May irritate the eyes. A void contact with eyes. When opening the container, preparing slurry and using the prepared slurry, wear:</p> <ul style="list-style-type: none"> • cotton overalls buttoned to the neck and wrist (or equivalent clothing) • chemical resistant gloves <p>Wash hands after use. After each day's use, wash gloves and contaminated clothing.</p>
Conditions for Safe Storage, Including any Incompatibilities:	<p><i>Non-refillable packs</i> Triple or preferably pressure rinse containers before disposal. Add rinsings to slurry in auger/mixer. DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and deliver empty packaging for appropriate disposal to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product.</p> <p><i>Refillable packs</i> Empty contents fully into application equipment. Close all valves and return to point of sale for refill or storage.</p>

Section 8: Exposure controls and personal protection

ALWAYS READ AND FOLLOW THE LABEL INSTRUCTIONS AND WARNINGS

	Component	Exposure limit	Value type
National Exposure Standards:	No exposure standard allocated		
Syngenta Exposure Standards:	Difenoconazole	8 mg/m ³	8 hour TWA
	Metalaxyl-M	10 mg/m ³	8 hour TWA
Biological Limit Values:	No biological limits allocated		
Engineering Controls:	Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. The extent of these protection measures depends on the actual risks in use. If airborne mists or vapours are generated, use local exhaust ventilation controls. Assess exposure and use any additional measures to keep airborne levels below any relevant exposure limit. Where necessary, seek additional occupational hygiene advice.		

Personal Protective Equipment: May irritate the eyes. Avoid contact with eyes. When opening the container, preparing slurry and using the prepared slurry, wear:

- cotton overalls buttoned to the neck and wrist (or equivalent clothing)
- chemical resistant gloves

Wash hands after use. After each day's use, wash gloves and contaminated clothing.

Section 9: Physical and chemical properties

Appearance:	Light red to dark red liquid	Boiling Point/Range:	~100°C
Odour:	Weak aromatic	Freezing/Melting Point:	Not known
pH:	4-8 at 1% w/v	Solubility:	Suspends in water
Vapour Pressure:	Not known	Specific Gravity or Density:	1.12 g/cm ³
Vapour Density:	Not known		

Flash Point:	>101 °C at 100 kPa Pensky-Martens cc	Explosive Properties:	Not explosive
Upper and Lower Flammable (Explosive) Limits in Air:	Not known	Oxidising Properties:	Not oxidising
Auto Ignition Temperature:	425 ± 10°C	Combustibility:	Not combustible
		Corrosiveness:	Not corrosive to HDPE

Section 10: Stability and reactivity

Reactivity:	See Section 10.3 "Possibility of hazardous reactions"
Chemical Stability:	The product is stable when used in normal conditions
Possibility of Hazardous Reactions:	No hazardous reactions by normal handling and storage according to provisions
Conditions to Avoid:	No decomposition if used as directed
Incompatible Materials:	No substances are known which lead to the formation of hazardous substances or thermal reactions
Hazardous Decomposition Products:	Combustion or thermal decomposition will evolve toxic and irritant vapours

Section 11: Toxicological information

Health Effects from Likely Routes of Exposure:		
Acute	Oral toxicity:	LOW TOXICITY Tests on rats indicate this product has a low toxicity following single doses of undiluted product. LD ₅₀ = >5,000 mg/kg
	Dermal toxicity:	LOW TOXICITY Tests on rats indicate this product has a low toxicity following skin contact with undiluted product. LD ₅₀ = >5,050 mg/kg

Inhalation:	LOW TOXICITY Tests on rats indicate this product is harmful due to inhalation of undiluted product. LC ₅₀ (4 hour) = >2.63 mg/L air
Skin irritation:	NON IRRITANT
Eye irritation:	SLIGHT IRRITANT
Sensitisation:	NOT A SENSITISER

Chronic **Difenoconazole technical** has been extensively tested on mammals and in test tube systems. No evidence of mutagenic, teratogenic or reproductive effects was obtained. Chronic 2 year feeding studies revealed no compound related tumourigenic effects in rats, whereas in mice high doses were associated with an increased incidence of liver tumours. The absence of mutagenic effects and the pronounced restriction of tumour appearance to one organ and one species suggests an underlying promotion process which is frequently seen in mice and which is considered to have no bearing in humans. Repeated high doses of difenoconazole technical were associated with cataracts in dogs and hens. Studies on other species and a subsequent dog study did not confirm this effect. Other effects at high doses included liver toxicity and adverse effects on blood cells and platelets.

Metalaxyl-M, either as technical grade Metalaxyl-M or as a 50% component of technical grade metalaxyl, has been extensively tested on laboratory mammals and in test tube systems. No evidence of mutagenic, teratogenic or reproductive effects was obtained.

Sedaxane technical has been extensively tested on mammals and in test tube systems. No evidence of mutagenic, teratogenic or reproductive effects was obtained. In chronic feeding studies at extremely high doses, numerically higher incidences of uterine, thyroid and liver tumours (male and/or female rats) and liver tumours (male mice) were within the range of normal background variation and are thus considered unrelated to treatment. Some overseas Regulatory Authorities have taken a more conservative position that these high-dose findings are treatment-related in rats and mice. The dose levels where these findings occur are not relevant to human exposure levels.

Section 12: Ecological information

Ecotoxicity:	Toxicity to fish:	Slightly toxic to fish <i>Oncorhynchus mykiss</i> (Rainbow Trout) LC ₅₀ = 18.7 mg/L, 96 hours Derived from component
	Toxicity to daphnia and other aquatic invertebrates:	Slightly toxic to Daphnia <i>Daphnia magna</i> (Water Flea) EC ₅₀ = 13 mg/L, 48 hours Derived from component
	Toxicity to algae:	Highly toxic to algae <i>Selenastrum Capricornutum</i> (Green algae) E _b C ₅₀ = 0.54 mg/L, 72 hours Derived from component
Persistence and Degradability:	Difenoconazole	<i>Water</i> Degradation half life = 1 day Difenoconazole is not persistent in water <i>Soil</i> Degradation half life = 149-187 days Difenoconazole is not persistent in soil
	Metalaxyl-M	<i>Water</i> Degradation half life = 22.4-47.5 days Metalaxyl is not persistent in water <i>Soil</i> Degradation half life = <50 days Metalaxyl is not persistent in soil

	Sedaxane	Not readily biodegradable <i>Water</i> Degradation half life = >1 year Sedaxane is persistent in water <i>Soil</i> Degradation half life = 83 days Sedaxane is not persistent in soil
Mobility in Soil:	Difenoconazole	Low mobility in soil
	Metalaxyl-M	Low to very high mobility in soil, depending on soil type
	Sedaxane	Low to medium mobility in soil
Bioaccumulative Potential:	Difenoconazole	High potential to bioaccumulate
	Metalaxyl-M	Low potential for bioaccumulation
	Sedaxane	Does not bioaccumulate

Section 13: Disposal considerations

Disposal Methods:	<p><i>Non-refillable packs</i> Triple or preferably pressure rinse containers before disposal. Add rinsings to slurry in auger/mixer. DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and deliver empty packaging for appropriate disposal to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product.</p> <p><i>Refillable packs</i> Empty contents fully into application equipment. Close all valves and return to point of sale for refill or storage.</p>
Special Precautions for Incineration or Landfill:	Not applicable

Section 14: Transport information

LAND TRANSPORT ADG	Not a dangerous good in Australia		
UN Number:	None allocated	Packing Group:	None allocated
UN Proper Shipping Name:	None allocated	Special Precautions for User:	None allocated
Transport Hazard Class:	None allocated	Hazchem or Emergency Action Code:	None allocated
Subsidiary Risk:	None allocated		

SEA TRANSPORT IMDG			
UN Number:	3082	Subsidiary Risk:	None allocated
UN Proper Shipping Name:	Environmentally Hazardous Substance, Liquid, N.O.S. (difenoconazole)	Packing Group:	III
Transport Hazard Class:	9	Environmental hazards for Transport Purposes:	Marine pollutant

AIR TRANSPORT IATA - DGR			
UN Number:	3082	Subsidiary Risk:	None allocated
UN Proper Shipping Name:	Environmentally Hazardous Substance, Liquid, N.O.S. (difenoconazole)	Packing Group:	III
Transport Hazard Class:	9		

Section 15: Regulatory information

APVMA Product Number:	64098
Poisons Schedule (SUSMP):	S5

Section 16: Any other relevant information

Date of preparation or last revision: November 2016
Source of Data: The information provided in this SDS is sourced from Syngenta internal studies which have been conducted according to Regulatory requirements including OECD and CIPAC Guidelines and EC Directives. 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.
Note: This product is a registered agricultural chemical and must, therefore, be used in accordance with the container label directions
CONTACT POINT: Regulatory Affairs Manager, Syngenta Australia Pty Ltd (02) 8876 8444 24 HOURS EMERGENCY CONTACT: 1800 033 111
This Material Safety Data Sheet summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.
DISCLAIMER This product complies with the specifications in its statutory registration. Implied terms and warranties are excluded. Syngenta's liability for breach of the express or any non-excludable implied warranty is limited to product replacement or purchase price refund. The purchaser must determine suitability for intended purpose and take all proper precautions in the handling, storage and use of the product including those on the label and/or safety data sheet failing which Syngenta shall have no liability.