SAFETY DATA SHEET

Section 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name:	**DIVIDEND FORMULA M Fungicide Seed Treatment**
Other Names:	**Proper shipping name:** Environmentally Hazardous Substance, Liquid, N.O.S. (difenoconazole) **Applicable only for marine and air transport** **Product code:** A12532G
Recommended Use:	Fungicide seed treatment for the control of seedling diseases
Company Details:	**Syngenta Crop Protection Pty Limited** ABN 33 002 933 717
Address:	**Level 1, 2-4 Lyonpark Road** **MACQUARIE PARK NSW 2113** **AUSTRALIA**
Telephone Number:	**(02) 8876 8444**
Emergency Telephone Number:	**24 hours - 1800 033 111**

Section 2: HAZARDS IDENTIFICATION

Hazard Classification:	Not classified as a hazardous chemical according to the Australian criteria for the classification of chemicals
Risk Phrases:	–
Safety Phrases:	–

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE

Chemical Identity of Pure Substance:	difenoconazole	metalaxyl-M
Synonym:	CGA169374	CGA329351, mefenoxam
CAS Number:	119446-68-3	70630-17-0

MIXTURE

Chemical Identity of Ingredients	CAS No	Proportion (%w/v)
difenoconazole	119446-68-3	9.2
metalaxyl-M	70630-17-0	2.3
1,2-propanediol	57-55-6	5 – 10
1,2,3-propanetriol	56-81-5	5 – 10
oleyl-polyglycolether with ethylene oxide	9004-98-2	5 – 10
other ingredients determined not to be hazardous	-	to 100

Section 4: FIRST AID MEASURES

Description of Necessary First Aid Measures:	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.	
	Ingestion:	If swallowed, seek medical advice immediately and show the container or label. Do NOT induce vomiting.
	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.
	Skin contact:	Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.
	Inhalation:	Move the victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a physician or poison control centre immediately.
Poisoning Symptoms:	Poisoning symptoms in laboratory animals were non-specific.	
Medical Advice:	Treat symptomatically.	

Section 5: FIRE FIGHTING MEASURES

Suitable Extinguishing Media:	*Extinguishing media - small fires* Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. *Extinguishing media - large fires* Alcohol-resistant foam or water spray.
Hazards from Combustion Products:	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 Precautions and Equipment for Fire Fighters:	Wear full protective clothing and self-contained breathing apparatus. Do not allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.

Section 6: ACCIDENTAL RELEASE MEASURES

Emergency Procedures:	In case of spillage it is important to take all steps necessary to • Avoid eye and skin contact • Avoid contamination of waterways
Methods and Materials for Containment and Clean Up:	**Procedure for spill** (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 • 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

Section 7: HANDLING AND STORAGE

Precautions for Safe Handling:	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) • elbow-length PVC gloves. Wash hands after use. After each day's use, wash gloves and contaminated clothing.
Conditions for Safe Storage:	Store in the closed, original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

ALWAYS READ AND FOLLOW THE LABEL INSTRUCTIONS AND WARNINGS

	Component	*Exposure limit*	*Value type*
National Exposure Standards:	1,2-propanediol	10 mg/m^3 Particulates 150 ppm 474 mg/m^3 Total (vapour & particulates)	8h TWA
	1,2,3-propanetriol	10 mg/m^3 Mist	8h TWA
Syngenta Exposure Standards:	difenoconazole	8 mg/m^3	8h TWA
	metalaxyl-M	10 mg/m^3	8h TWA
Biological Limit Values:	Not applicable.		
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:			
Protective measures:	The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice. Personal protective equipment should be certified to appropriate standards.		
Respiratory protection:	No personal respiratory protective equipment normally required. If airborne mists or vapours are generated in enclosed areas, use local exhaust ventilation controls. A particulate filter respirator may be necessary until effective technical measures are installed.		
Hand protection:	When opening the container, preparing slurry and using the prepared slurry, wear elbow-length PVC gloves.		
Eye protection:	May irritate the eyes. Avoid contact with eyes. Follow any site specific eye protection policies.		
Skin and body protection:	When opening the container, preparing slurry and using the prepared slurry, wear: • cotton overalls buttoned to the neck and wrist (or equivalent clothing) • elbow-length PVC gloves. Wash hands after use. After each day's use, wash gloves and contaminated clothing.		

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Orange red to dark red liquid	**Boiling Point/Range:**	~100°C
Odour:	Sweetish, chalky	**Freezing/Melting Point:**	Not known
pH:	5 – 9 at 1 % w/v	**Solubility:**	Suspends in water
Vapour Pressure:	Not known	**Specific Gravity or Density:**	1.092 g/cm^3 at 20 °C
Vapour Density:	Not known		

Flash Point:	> 101 °C at 102 kPa Pensky-Martens c.c.	**Explosive Properties:**	Not explosive
Upper and Lower Flammable (Explosive) Limits in Air:	Not known	**Oxidising Properties:**	not oxidising
		Combustibility:	Not combustible
Autoignition Temperature:	465 °C	**Corrosiveness:**	Not corrosive to tin plate, galvanised sheet metal, stainless steel and HDPE. Corrosive to sheet steel.

Section 10: STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal conditions.
Conditions to Avoid:	None known
Incompatible Materials:	None known
Hazardous Decomposition Products:	Combustion or thermal decomposition will evolve toxic and irritant vapours.
Hazardous Reactions:	None known. Hazardous polymerisation does not occur.

Section 11: TOXICOLOGICAL INFORMATION

Health Effects from Likely Routes of Exposure:

Acute:	**Oral toxicity:**	**LOW TOXICITY** Tests on rats indicate a low toxicity following single doses of a similar undiluted product. (LD_{50} >5,050 mg/kg)
	Dermal toxicity:	**LOW TOXICITY** Tests on rabbits indicate a low toxicity due to dermal contact with a similar undiluted product. (LD_{50} >5,050 mg/kg)
	Inhalation:	**LOW TOXICITY** Tests on rats indicate a low toxicity due to dermal contact with a similar undiluted product. (LC_{50} (4h) >2.73 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.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity:	*Toxicity to fish:*	*Oncorhynchus mykiss* (rainbow trout): LC_{50} = 9.5 mg/L, 96 h Derived from components.
	Toxicity to daphnia and other aquatic invertebrates:	*Daphnia magna* (Water flea): EC_{50} = 9.1 mg/L, 48 h Derived from components.
	Toxicity to algae:	*Desmodesmus subspicatus* (green algae): EbC50 = 0.4 mg/L, 72 h Derived from components.
Persistence and Degradability:	*Difenoconazole:*	*Water* Degradation half life: 1 d Difenoconazole is not persistent in water
		Soil Degradation half life : 149 - 187 d Difenoconazole is not persistent in soil.
	Metalaxyl-M:	*Water* Degradation half life: 22.4 - 47.5 d Metalaxyl is not persistent in water.
		Soil Degradation half life : < 50 d Metalaxyl is not persistent in soil.
Mobility	*Difenoconazole:*	Difenoconazole has low mobility in soil.
	Metalaxyl-M:	Metalaxyl has a range from low to very high mobility in soil depending on soil type.
Bioaccumulative Potential:	*Difenoconazole:*	Difenoconazole has high potential to bioaccumulate.
	Metalaxyl-M:	Metalaxyl has a low potential for bioaccumulation.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Methods and Containers:	*Non-returnable containers* Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. 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 bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt. *Returnable containers* Empty contents fully into application equipment. Close all valves and return to point of sale for refill or storage.
Special Precautions for Landfill or Incineration:	Not applicable

Section 14: TRANSPORT INFORMATION

LAND TRANSPORT ADG	Not dangerous goods in Australia		
UN Number:	None allocated	**Packing Group:**	None allocated
UN Proper Shipping Name:	None allocated	**Special Precautions for User:**	None allocated
Class:	None allocated	**Hazchem 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
Class:	9	**Marine Pollutant:**	Yes

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

Section 15: REGULATORY INFORMATION

APVMA Product Number:	56880
Poisons Schedule (SUSDP):	5

Section 16: OTHER INFORMATION

Date of preparation or last revision: March 2010

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 EU 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 Crop Protection Pty Limited
(02) 8876 8444

24 HOURS EMERGENCY CONTACT: 1800 033 111

This 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.