

## SAFETY DATA SHEET

### Section 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

<b>Product Name:</b>	<b>RIDOMIL® GOLD MZ WG Systemic and Protective Fungicide</b>
<b>Other Names:</b>	<b>Proper Shipping Name:</b> Environmentally Hazardous Substance, Solid, N.O.S. (Mancozeb) <b>Applicable only for marine and air transport</b>
	<b>Product code:</b> A9651D
<b>Recommended Use:</b>	Fungicide for the control of certain foliar diseases of Cucurbits, Lettuce, Onions, Ornamentals, Potatoes, Rhubarb, Strawberries (non-fruiting) and Tobacco
<b>Company Details:</b>	<b>Syngenta Crop Protection Pty Limited</b> ABN 33 002 933 717
<b>Address:</b>	<b>Level 1, 2-4 Lyonpark Road</b> <b>MACQUARIE PARK NSW 2113</b> <b>AUSTRALIA</b>
<b>Telephone Number:</b>	<b>(02) 8876 8444</b>
<b>Emergency Telephone Number:</b>	<b>24 hours - 1800 033 111</b>

### Section 2: HAZARDS IDENTIFICATION

<b>Hazard Classification:</b>	Classified as a hazardous chemical according to the Australian criteria for the classification of chemicals
<b>Risk Phrases:</b>	R37 Irritating to respiratory system. R43 May cause sensitization by skin contact.
<b>Safety Phrases:</b>	-

### Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE		
<b>Chemical Identity of Pure Substance:</b>	Metalaxyl-M	Mancozeb
<b>Synonym:</b>	Mefenoxam	--
<b>CAS Number:</b>	70630-17-0	8018-01-7

MIXTURE		
Chemical Identity of Ingredients	CAS No	Proportion (% w/w)
Metalaxyl-M	70630-17-0	4
Mancozeb	8018-01-7	64
Other ingredients determined not to be hazardous	-	to 100

### Section 4: FIRST AID MEASURES

<p><b>Description of Necessary First Aid Measures:</b></p>	<p>In case of poisoning by any exposure route get to a doctor or hospital quickly. Phone Poisons Information Centre on 131 126. Have the product label or SDS with you when calling or going for treatment.</p> <p><b>Ingestion:</b> If swallowed, seek medical advice immediately and show this container or label. DO NOT induce vomiting.</p> <p><b>Eye contact:</b> 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><b>Skin contact:</b> 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.</p> <p><b>Inhalation:</b> Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a physician or Poison Information Centre immediately.</p>
<p><b>Poisoning Symptoms:</b> <b>Medical Advice:</b></p>	<p>Poisoning symptoms in laboratory animals were non-specific.          There is no specific antidote available. Treat symptomatically.</p>

### Section 5: FIRE FIGHTING MEASURES

<p><b>Suitable Extinguishing Media:</b></p>	<p><i>Extinguishing media - small fires</i>          Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide extinguisher. DO NOT use direct jet of water.</p> <p><i>Extinguishing media - large fires</i>          Use alcohol-resistant foam or water spray. DO NOT use direct jet of water.</p>
<p><b>Hazards from Combustion Products:</b></p>	<p>This product contains combustible organic components that may burn and decompose during a fire producing dense black smoke containing hazardous products of combustion. Combustion products are toxic and /or irritant. Exposure to decomposition products may be a hazard to health.</p>
<p><b>Special Protective Precautions and Equipment for Fire Fighters:</b></p>	<p>When fighting a major fire wear self-contained breathing apparatus and protective equipment.</p>

### Section 6: ACCIDENTAL RELEASE MEASURES

<p><b>Emergency Procedures:</b></p>	<p>In case of spillage it is important to take all steps necessary to</p> <ul style="list-style-type: none"> <li>• Avoid eye and skin contact</li> <li>• Avoid contamination of waterways</li> </ul>
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<b>Methods and Materials for Containment and Clean Up:</b>	<p><b>Procedure for spill</b></p> <ol style="list-style-type: none"> <li>(1) Keep all bystanders away</li> <li>(2) Wear full length clothing and PVC gloves</li> <li>(3) Reposition any leaking containers so as to minimise leakage</li> <li>(4) Sweep spilt material into a pile</li> <li>(5) Shovel into drums</li> <li>(6) Disposal of the material will depend upon the extent of the spill           <ul style="list-style-type: none"> <li>• For quantities up to 50 kg of product bury in a secure landfill site</li> <li>• For quantities greater than 50 kg seek advice from the manufacturer (use emergency contact number below) before attempting disposal. Contain in a secure location until disposal method is established</li> </ul> </li> <li>(7) Decontaminate spill area with detergent and water and rinse with the smallest volume of water practicable</li> </ol>
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**Section 7: HANDLING AND STORAGE**

<b>Precautions for Safe Handling:</b>	<p>Will irritate the eyes, nose, throat and skin. Avoid contact with the eyes and skin. Do not inhale dust or spray mist. When preparing spray and using prepared spray wear:</p> <ul style="list-style-type: none"> <li>• cotton overalls buttoned to the neck and wrist,</li> <li>• a washable hat,</li> <li>• elbow-length PVC gloves and</li> <li>• face shield or goggles.</li> </ul> <p>If product in eyes, wash it out immediately with water. Wash hands after use. After each day's use, wash gloves, face shield or goggles and contaminated clothing.</p>
<b>Conditions for Safe Storage:</b>	<p>Store in the closed, original container in a dry, well-ventilated area as cool as possible out of direct sunlight</p>

**Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

**ALWAYS READ AND FOLLOW THE LABEL INSTRUCTIONS AND WARNINGS**

	<i>Component</i>	<i>Exposure limit</i>	<i>Value type</i>
<b>National Exposure Standards:</b>	No exposure standard allocated		
<b>Syngenta Exposure Standards</b>	Mancozeb	1 mg/m <sup>3</sup>	TWA
	Metalaxyl-M	10 mg/m <sup>3</sup>	TWA
<b>Biological Limit Values:</b>	No biological limit allocated		
<b>Engineering Controls:</b>	No special requirements. Product is used outdoors		
<b>Personal Protective Equipment:</b>	<p>Will irritate the eyes, nose, throat and skin. Avoid contact with the eyes and skin. Do not inhale dust or spray mist. When preparing spray and using prepared spray wear:</p> <ul style="list-style-type: none"> <li>• cotton overalls buttoned to the neck and wrist,</li> <li>• a washable hat,</li> <li>• elbow-length PVC gloves and</li> <li>• face shield or goggles.</li> </ul> <p>If product in eyes, wash it out immediately with water. Wash hands after use. After each day's use, wash gloves, face shield or goggles and contaminated clothing.</p>		

### Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Light yellow to brown granules	<b>Boiling Point/Range:</b>	Not Applicable
<b>Odour:</b>	Weak	<b>Melting Point:</b>	Not available
<b>pH:</b>	5 - 9 (1% w/v water)	<b>Solubility in water</b>	dispersible
<b>Vapour Pressure:</b>	Not available	<b>Bulk Density:</b>	0.45 - 0.65 g/cm <sup>3</sup>

<b>Flash point:</b>	Not applicable	<b>Explosive properties:</b>	Not explosive
<b>Upper and Lower Flammable (Explosive) Limits in Air:</b>	Not highly flammable	<b>Oxidising properties:</b>	Not oxidising
<b>Ignition Temperature:</b>	340°C	<b>Combustibility:</b>	Not applicable
		<b>Corrosiveness:</b>	Not corrosive

### Section 10: STABILITY AND REACTIVITY

<b>Chemical Stability:</b>	Stable under standard conditions.
<b>Conditions to Avoid:</b>	None known.
<b>Incompatible Materials:</b>	None known.
<b>Hazardous Decomposition Products:</b>	Combustion or thermal decomposition will evolve toxic and irritant vapours
<b>Hazardous Reactions:</b>	None known. Hazardous polymerization does not occur.

### Section 11: TOXICOLOGICAL INFORMATION

<b>Health Effects from Likely Routes of Exposure:</b>		
<b>Acute:</b>	<b>Oral toxicity:</b>	<b>LOW TOXICITY</b> Tests on rats indicate this product not harmful following single doses of undiluted product. (LD <sub>50</sub> > 5000 mg/kg)
	<b>Dermal toxicity:</b>	<b>LOW TOXICITY</b> Tests on rabbits indicate this product has a low toxicity following skin contact with undiluted product. (LD <sub>50</sub> > 2000 mg/kg)
	<b>Inhalation:</b>	<b>LOW TOXICITY</b> Tests on rats indicate this product is not harmful due to inhalation of undiluted product. (LC <sub>50</sub> >5.13 mg/L)
	<b>Skin irritation:</b>	<b>NON IRRITANT(Rabbit)</b>
	<b>Eye irritation:</b>	<b>MODERATE IRRITANT (Rabbit)</b>
	<b>Sensitisation:</b>	<b>SENSITISER (Guinea pig)</b>

**Chronic:** **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.

**Mancozeb** has been extensively tested on laboratory mammals and in test-tube systems. At high levels mancozeb affects the thyroid, liver, and nervous system in laboratory animals. The thyroid and liver effects are due to its metabolism in small amounts to ethylenethiourea (ETU), which interferes with thyroid hormone synthesis and induces stress-related liver growth. No evidence of mutagenic effects was obtained. Ethylenethiourea, a trace contaminant and breakdown product of mancozeb, has caused thyroid and pituitary tumours, which occurred at dose levels higher than likely human expose levels for the use of this product. ETU has caused birth defects in laboratory mammals at high dose levels that interfered with normal thyroid function.

**Section 12: ECOLOGICAL INFORMATION**

<b>Ecotoxicity:</b>	<i>Toxicity to fish:</i>	<b>Slightly toxic to fish</b> <i>Cyprinus carpio</i> (Carp): LC <sub>50</sub> = 23 mg/L, 96 h
	<i>Toxicity to daphnia and other aquatic invertebrates:</i>	<b>Highly toxic to aquatic invertebrates</b> <i>Daphnia magna</i> (Water flea): EC <sub>50</sub> = 0.8 mg/L, 48 h
	<i>Toxicity to algae:</i>	<b>Highly toxic to algae</b> <i>Pseudokirchneriella subcapitata</i> (green algae): E <sub>r</sub> C <sub>50</sub> = 0.219 mg/L, 72 h <i>Pseudokirchneriella subcapitata</i> (green algae): E <sub>b</sub> C <sub>50</sub> = 0.0929 mg/L, 72 h
	<i>Toxicity to soil dwelling organisms:</i>	<b>Slightly toxic to earthworms</b> <i>Eisenia foetida</i> (earthworm): LC <sub>50</sub> >100 mg/kg, 14 d (similar formulation)
	<i>Bees:</i>	<b>Non-toxic to bees</b> (similar formulation)
<b>Persistence and Degradability:</b>	Metalaxyl-M and Mancozeb are not persistent in water and soil	
<b>Mobility</b>	Metalaxyl-M has a range from low to very high mobility in soil depending on soil type. Mancozeb has low mobility in soil.	
<b>Environmental Fate (Exposure):</b>	Incorporated into organic molecules	
<b>Bioaccumulative Potential:</b>	Metalaxyl-M has low potential for bioaccumulation	

**Section 13: DISPOSAL CONSIDERATIONS**

<b>Disposal Methods and Containers:</b>	Single rinse plastic bags before disposal. Add rinsings to the spray tank. Do not dispose of undiluted chemicals on-site. Puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500mm 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.
<b>Special Precautions for Landfill or Incineration:</b>	Not applicable

### Section 14: TRANSPORT INFORMATION

<b>LAND TRANSPORT</b> ADG	Not a dangerous good in Australia		
<b>UN Number:</b>	None allocated	<b>Packing Group:</b>	None allocated
<b>UN Proper Shipping Name:</b>	None allocated	<b>Special Precautions for User:</b>	None allocated
<b>Class:</b>	None allocated	<b>Hazchem Code:</b>	None allocated
<b>Subsidiary Risk:</b>	None allocated		

<b>SEA TRANSPORT</b> IMDG			
<b>UN Number:</b>	3077	<b>Subsidiary Risk:</b>	None allocated
<b>UN Proper Shipping Name:</b>	Environmentally Hazardous Substance, Solid, N.O.S. (Mancozeb)	<b>Packing Group:</b>	III
<b>Class:</b>	9	<b>Marine Pollutant:</b>	Yes

<b>AIR TRANSPORT</b> IATA - DGR			
<b>UN Number:</b>	3077	<b>Subsidiary Risk:</b>	None allocated
<b>UN Proper Shipping Name:</b>	Environmentally Hazardous Substance, Solid, N.O.S. (Mancozeb)	<b>Packing Group:</b>	III
<b>Class:</b>	9		

### Section 15: REGULATORY INFORMATION

<b>APVMA Product Number:</b>	52926
<b>Poisons Schedule (SUSDP):</b>	5

### Section 16: OTHER INFORMATION

<b>Date of preparation or last revision:</b> May 2010
<b>Source of Data:</b> 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.
<b>Note:</b> This product is a registered agricultural chemical and must, therefore, be used in accordance with the container label directions
<b>CONTACT POINT:</b> Regulatory Affairs Manager, Syngenta Crop Protection Pty Limited (02) 8876 8444 <b>24 HOURS EMERGENCY CONTACT: 1800 033 111</b>
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.