

## SAFETY DATA SHEET

### Section 1: IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND SUPPLIER

<b>Product Name:</b>	<b>RIDOMIL GOLD MZ WG</b>
<b>Design Code:</b>	A9651D
<b>Recommended Use:</b>	For the control Early and Late Blight in Potatoes and Tomatoes, Dryberry in Canefruit, Downy Mildew in Grapes, Onions, Cucurbits and Brassica Seedbeds, Phytophthora Spear Rot in Asparagus, Phytophthora Crown Rot in Asparagus transplants and Phytophthora Root Rots in Tree nurseries.
<b>Company Details:</b>	<b>Syngenta Crop Protection Limited</b>
<b>Address:</b>	<b>Tower II, Level 7, 110 Symonds Street Private Bag 92618, Symonds Street AUCKLAND NEW ZEALAND</b>
<b>Telephone number:</b>	<b>(weekdays) 09 - 306 1500</b>
<b>Emergency Telephone number:</b>	<b>(24 Hours) 0800 734 607</b>
<b>National Poisons &amp; Hazchem Information Centre :</b>	<b>0800 POISON (0800 764 766)</b>
<b>Date of Preparation:</b>	<b>14 April, 2005</b>

### Section 2: HAZARDS IDENTIFICATION

<b>Hazard classification:</b>	6.5B, 6.9B, 9.1A
<b>Priority Identifier:</b>	WARNING KEEP OUT OF REACH OF CHILDREN
<b>Secondary Identifiers:</b>	6.5B = May cause sensitisation from prolonged skin contact. 6.9B = May cause liver damage from repeated oral exposure at high doses. 9.1A = Very toxic to aquatic organisms

### Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

<i>Pure Substance:</i>		
<b>Chemical Identity of pure substance:</b>	methyl <i>N</i> -(methoxyacetyl)- <i>N</i> -(2,6-xylyl)- <i>D</i> -alaninate; methyl ( <i>R</i> )-2-[[[(2,6-dimethylphenyl)methoxyacetyl]amino]propionate	
<b>Common Name:</b>	Metalaxyl-M	
<b>Synonyms:</b>	CGA 329351	
<b>CAS number:</b>	70630-17-0	
<i>Pure Substance:</i>		
<b>Chemical Identity of pure substance:</b>	[[[1,2-ethanediy]bis[carbamo]dithioato]](2-)]manganese mixture with [[[1,2-ethanediy]bis[carbamo]dithioato]](2)]zinc	
<b>Common Name:</b>	Mancozeb	
<b>CAS number:</b>	8018-01-7	
<i>Mixture:</i>		
<b>Chemical Identity of ingredients:</b>		
<b>Ingredient</b>	<b>CAS no.</b>	<b>Content (% w/w)</b>
<b>Metalaxyl-M (technical grade)</b>	70630-17-0	4%
Mancozeb	8018-01-7	64%
other ingredients determined not to be hazardous	-	to 100%

## Section 4: FIRST AID MEASURES

<b>Necessary First Aid measures:</b>	For advice contact the National Poisons Centre on 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.
	Swallowed: If swallowed <b>DO NOT</b> induce vomiting.
	Eye: If concentrate or spray solution enters the eyes wash it out immediately with water. Remove contact lenses.
	Skin: If skin contact occurs remove contaminated clothing and wash affected areas thoroughly with running water.
	Inhaled: If inhaled move the victim to fresh air immediately
<b>Poisoning symptoms:</b>	No case of human poisoning due to this product is on record. The poisoning symptoms observed for laboratory mammals were non-specific.
<b>Workplace facilities:</b>	No specific facilities required. Standard emergency equipment must be available.
<b>Hygiene Practices:</b>	Avoid contact with skin and eyes and inhalation of dust from concentrate or spray mist. When mixing or applying, wear protective clothing, including cotton overalls, gloves and face shield. Wash concentrate or splashes of spray mixture from eyes or skin immediately. <b>DO NOT</b> eat, drink or smoke while using. Wash hands and face before eating, drinking or smoking and after work. Wash protective clothing after use.
<b>Notes for Medical Personnel:</b>	No specific antidote is available. If poisoning is suspected apply symptomatic therapy.

## Section 5: FIRE-FIGHTING MEASURES

<b>Type of Hazard:</b>	During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.
<b>Fire Hazard Properties:</b>	As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion. Exposure to decomposition products may be a hazard to health.
<b>Regulatory Requirements:</b>	not applicable
<b>Extinguishing Media and methods:</b>	Use dry chemical, foam or CO <sub>2</sub> extinguishing media.
<b>Hazchem Code:</b>	2Y
<b>Recommended Protective Clothing:</b>	When fighting a major fire wear an air-supplied respirator. Wear full protective clothing.

## Section 6: ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions:</b>	<b>Emergency Procedures:</b> Ensure suitable personal protection during removal of spillages. This means wearing eye protection, chemically resistant gloves, boots and overalls.
<b>Environmental Precautions:</b>	Washings must be prevented from entering surface water drains or waterways.
<b>Procedure for spill:</b>	<ol style="list-style-type: none"><li>(1) Keep all bystanders away.</li><li>(2) Wear goggles, half face-piece respirator with combined dust and vapour cartridge, full length clothing and PVC gloves.</li><li>(3) Reposition any leaking containers so as to minimise further leakage.</li><li>(4) Dam and absorb spill with an absorbent material (e.g. sand or soil).</li><li>(5) Shovel the absorbed spill into drums.</li><li>(6) Decontaminate the spill area with detergent and water and rinse with the smallest volume of water practicable.</li></ol>
<b>Procedure for Disposal:</b>	Disposal of the absorbed material will depend upon the extent of the spill. Contaminated material must be disposed of in accordance with all local authority requirements. It is suggested: <ul style="list-style-type: none"><li>• For quantities up to 50 kg of product bury in a secure approved 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>

## Section 7: HANDLING AND STORAGE

<b>Precautions for safe handling:</b>	<b>Handling:</b> No special technical protective measures required. No special handling advice required.
<b>Regulatory Requirements:</b>	not required.
<b>Handling practices:</b>	Avoid contact with skin and eyes and inhalation of dust from concentrate or spray mist. When using, do not eat, drink or smoke. Wash face and hands before eating, drinking or smoking.
<b>Approved Handlers:</b>	This product must be under the control of an approved handler during use.

<b>Conditions for Safe Storage:</b>	<b>Storage:</b> Keep out of reach of children. Store in original container, tightly closed, away from foodstuffs. Store in a cool, dry, well ventilated place and protect from sunlight. Avoid temperatures below -10°C or above 35°C.
<b>Store Site Requirements:</b>	Signage and secondary containment will be required at sites holding more than 100 kg of any product classified as 9.1A (eg Ridomil Gold MZ WG).
<b>Packaging:</b>	Store in original container, tightly closed, away from foodstuffs.

## Section 8: EXPOSURE CONTROL / PERSONAL PROTECTION

ALWAYS READ AND FOLLOW THE LABEL INSTRUCTIONS AND WARNINGS

<b>Workplace Exposure Guidelines:</b>	
<b>Workplace Exposure Standards:</b>	not applicable
<b>Application in the workplace:</b>	not applicable
<b>Exposure standards outside the workplace:</b>	none set
<b>Engineering controls:</b>	<p>No special requirements. Product is used outdoors. 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 vapors are generated, use local exhaust ventilation controls. Assess exposure and use any additional measures to keep airborne levels below any relevant exposure limit.</p> <p>Follow precaution statements on the label and the use and safety directions in Code of Practice for the Management of agrichemical NZS8409.</p>
<b>Personal Protection:</b>	Use only protective equipment bearing the mark of the Standards Association with Australia/ New Zealand. In case of heavy exposure, wear dust mask, goggles, chemical resistant gloves and heavy duty cotton overalls.
<b>General Hygiene:</b>	Change work clothes daily. May irritate the eyes and skin. Avoid contact with eyes and skin. Do not inhale dust or spray mist. If product gets on skin immediately wash area with soap and water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Light yellow to light brown granules
<b>Odour:</b>	weak
<b>pH:</b>	5-9
<b>Flammability:</b>	Not highly flammable
<b>Dust explosion class:</b>	Class 1
<b>Oxidising properties:</b>	not oxidising
<b>Explosive properties:</b>	not explosive
<b>Bulk Density:</b>	0.45-0.65 g/cm <sup>3</sup>
<b>Water solubility:</b>	miscible
<b>Surface tension:</b>	57.8 mN/m at 20°C

## Section 10: STABILITY AND REACTIVITY

<b>Stability of the Substance:</b>	Stable under normal conditions.
<b>Conditions to Avoid:</b>	none known
<b>Material to Avoid:</b>	none known
<b>Hazardous decomposition products</b>	Combustion or thermal decomposition will evolve toxic and irritant vapours.
<b>Hazardous polymerisation</b>	Hazardous polymerisation does not occur.
<b>Specific Data</b>	not applicable

## Section 11: TOXICOLOGICAL INFORMATION

### HSNO Classifications:

- 6.5B - May cause sensitisation from prolonged skin contact.  
 6.9B - May liver damage from repeated oral exposure at high doses.

### Acute Effects

**Toxicity** - This product is slightly hazardous (WHO Hazard Class III)

Swallowed:	LD <sub>50</sub>	>2000 mg/kg
Dermal absorption:	LD <sub>50</sub>	2000 mg/kg
Inhaled:	LC <sub>50</sub> (4 h)	>5.16 mg/l

#### **Irritation**

Eye: **NON-IRRITANT** (rabbit)  
 Skin: **NON-IRRITANT** (rabbit)

#### **Sensitization**

**SENSITISER** (guinea pigs)

### Chronic / Long Term Effects (Active Ingredient)

**METALAXYL-M technical** has been extensively tested on laboratory mammals and in test-tube systems.

Reproductive/Development Effects: None observed.

Chronic/Subchronic Toxicity Studies: Liver effects at high doses.

Carcinogenicity: None observed.

## Section 12: ECOTOXICITY INFORMATION

**HSNO Classifications:** 9.1D = Harmful to aquatic organisms

**Environmental Risk and Safety Phrases:** Avoid contamination of any water supply with chemical or empty container.

The information presented below is for the active ingredient, metalaxyl-M. A thorough review of environmental information is not possible in this document.

### Ecotoxicity Effects

**Toxicity to birds:** LC<sub>50</sub> / EC<sub>50</sub> = 5,620 ppm (8-day dietary - bobwhite quail)

**Acute toxicity to fish:** LC<sub>50</sub> / EC<sub>50</sub> = >121 ppm (trout)

**Toxicity to Algae:** ErC<sub>50</sub> (72 h) = 103 mg/L (Scenedesmus subspicatus)

**Toxicity to aquatic Invertebrates:** LC<sub>50</sub> / EC<sub>50</sub> = >113 ppm (water flea)

**Toxicity to soil dwelling organisms:** Eisenia foetida LC<sub>50</sub> ( 14 days) = 830mg/kg.

**Acute toxicity to Bees:** LD<sub>50</sub> (48 h, contact) = 25µg/bee

### Environmental Fate

The information presented here is for the active ingredient, Metalaxyl -M.

Metalaxyl-M is stable in water. DT<sub>50</sub> >200 days. Metalaxyl -M is not persistent in soil. DT<sub>50</sub> 5-30 days. Metalaxyl -M has moderate mobility in soil. Kow log P= 1.71 (25°C)

The information presented below is for the active ingredient, mancozeb. A thorough review of environmental information is not possible in this document.

<b>Ecotoxicity Effects</b>	
<b>Acute toxicity to Birds:</b>	No mortalities in mallard ducks at 6400 mg/kg and in Japanese quail at 3200mg/kg in 10 day dietary study.
<b>Acute toxicity to fish:</b>	LC <sub>50</sub> (48 h) = 9.0 mg/L (Goldfish) LC <sub>50</sub> (48 h) = 2.2 mg/L (Rainbow trout) LC <sub>50</sub> (48 h) = 5.2 mg/L (Catfish) LC <sub>50</sub> (48 h) = 4.0 mg/L (Carp)
<b>Toxicity to bees:</b>	LC <sub>50</sub> = 0.193 mg/bee
<b>Environmental Fate</b>	
Mancozeb is rapidly degraded in water. DT <sub>50</sub> 17h (pH 7 25 <sup>0</sup> C) Mancozeb is not persistent in soil. DT <sub>50</sub> 6-15 days	

### Section 13: DISPOSAL CONSIDERATIONS

<b>Product Disposal:</b>	Dispose of this product only by using according to the label, or at an approved landfill or other approved facility.
<b>Container Disposal:</b>	Ensure the container is empty. Rinse the container and add the residue to the spray tank. If allowed under local Territorial Authority District Plans burn if circumstances, especially wind direction, permit otherwise crush and bury in an approved local authority facility. DO NOT reuse this container for any other purpose.

### Section 14: TRANSPORT INFORMATION

<b>Rail / Road (RID/ADR)</b>	UN-No:	3077
	Class:	9
	Packaging Group:	III
	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (MANCOZEB 64%)
<b>Sea (IMDG-Code)</b>	UN-No:	3077
	Class:	9
	Packaging Group:	III
	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (MANCOZEB 64%)
	Marine Pollutant:	Marine Pollutant
<b>Air (ICAO/IATA)</b>	UN-No:	3077
	Class:	9
	Packaging Group:	III
	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (MANCOZEB 64%)

## Section 15: REGULATORY INFORMATION

<b>HSNO Approval Number:</b>	HSR000470
<b>HSNO Controls (inc. Tracking and Record Keeping):</b>	See <a href="http://www.ermanz.govt.nz/search/registers.html">http://www.ermanz.govt.nz/search/registers.html</a> for controls.
<b>ACVM Registration:</b>	P 5658
<b>ACVM Controls:</b>	See <a href="http://www.nzfsa.govt.nz/acvm">www.nzfsa.govt.nz/acvm</a> for registration conditions.

## Section 16: OTHER INFORMATION

**Note:** This product is a registered agricultural chemical and must therefore be used in accordance with the container label directions. 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.

**CONTACT POINT:** Business Manager - Crop Protection: (09) 306 1503  
**24 HOURS EMERGENCY CONTACT: 0800 734 607**

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 MSDS 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.

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