

SAFETY DATA SHEET

Section 1: IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND SUPPLIER

Product Name:	RIDOMIL GOLD MZ WG
Design Code:	A9651D
Recommended Use:	For the control of 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.
Company Details:	Syngenta Crop Protection Limited
Address:	Tower II, Level 7, 110 Symonds Street Private Bag 92618, Symonds Street AUCKLAND NEW ZEALAND
Telephone number:	(weekdays) 09 - 306 1500
Emergency Telephone number:	(24 Hours) 0800 734 607
National Poisons & Hazchem Information Centre :	0800 POISON (0800 764 766)
Date of Preparation:	6 March, 2013

Section 2: HAZARDS IDENTIFICATION

Hazard classification:	6.5B, 6.9B, 9.1A
Priority Identifier:	WARNING KEEP OUT OF REACH OF CHILDREN
Secondary Identifiers:	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>	
Chemical Identity of pure substance:	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
Common Name:	Metalaxyl-M
Synonyms:	CGA 329351
CAS number:	70630-17-0
<i>Pure Substance:</i>	
Chemical Identity of pure substance:	[[[1,2-ethanediylbis[carbamo-dithioato]](2-)]manganese mixture with [[[1,2-ethanediylbis[carbamo-dithioato]](2)]zinc
Common Name:	Mancozeb
CAS number:	8018-01-7

<i>Mixture:</i>		
Chemical Identity of ingredients:		
Ingredient	CAS no.	Content (% w/w)
Metalaxyl-M (technical grade)	70630-17-0	4%
Mancozeb	8018-01-7	64%
other ingredients determined not to be hazardous	-	to 100%

Section 4: FIRST AID MEASURES

Necessary First Aid measures:	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 DO NOT 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
Poisoning symptoms:	No case of human poisoning due to this product is on record. The poisoning symptoms observed for laboratory mammals were non-specific.
Workplace facilities:	No specific facilities required. Standard emergency equipment must be available.
Hygiene Practices:	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. DO NOT eat, drink or smoke while using. Wash hands and face before eating, drinking or smoking and after work. Wash protective clothing after use.
Notes for Medical Personnel:	No specific antidote is available. If poisoning is suspected apply symptomatic therapy.

Section 5: FIRE-FIGHTING MEASURES

Type of Hazard:	During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.
Fire Hazard Properties:	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.
Regulatory Requirements:	not applicable
Extinguishing Media and methods:	Use dry chemical, alcohol-resistant foam or CO ₂ extinguishing media.
Hazchem Code:	2Y
Recommended Protective Clothing:	When fighting a major fire wear an air-supplied respirator. Wear full protective clothing.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Emergency Procedures: Ensure suitable personal protection during removal of spillages. This means wearing eye protection, chemically resistant gloves, boots and overalls.
Environmental Precautions:	Washings must be prevented from entering surface water drains or waterways.
Procedure for spill:	<ol style="list-style-type: none">(1) Keep all bystanders away.(2) Wear goggles, half face-piece respirator with combined dust and vapour cartridge, 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 (e.g. sand or soil).(5) Shovel the absorbed spill into drums.(6) Decontaminate the spill area with detergent and water and rinse with the smallest volume of water practicable.
Procedure for Disposal:	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">• For quantities up to 50 kg of product bury in a secure approved landfill site.• 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.

Section 7: HANDLING AND STORAGE

Precautions for safe handling:	Handling: No special technical protective measures required. No special handling advice required.
Regulatory Requirements:	not required.
Handling practices:	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.
Approved Handlers:	This product must be under the control of an approved handler during use.

Conditions for Safe Storage:	Storage: 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.
Store Site Requirements:	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).
Packaging:	Store in original container, tightly closed, away from foodstuffs.

Section 8: EXPOSURE CONTROL / PERSONAL PROTECTION

ALWAYS READ AND FOLLOW THE LABEL INSTRUCTIONS AND WARNINGS

Workplace Exposure Guidelines:	
Workplace Exposure Standards:	mancozeb: 8 h TWA = 1 mg/m ³ (Source: Supplier) Metalaxyl-M: 8 h TWA = 10 mg/m ³ (Source: Syngenta)
Application in the workplace: Exposure standards outside the workplace:	not applicable none set
Engineering controls:	<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 vapours 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>
Personal Protection:	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.
General Hygiene:	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

Appearance:	Light yellow to light brown granules
Odour:	weak
pH:	5-9 at 1% w/v
Flammability:	Not highly flammable
Minimum ignition temperature:	340°C
Dust explosion class:	Forms flammable dust clouds
Minimum ignition energy:	>1J
Oxidising properties:	not oxidising
Explosive properties:	not explosive
Bulk Density:	0.45-0.65 g/cm ³
Miscibility:	miscible
Surface tension:	57.8 mN/m at 20°C
Burning number:	1 at 20°C 5 at 100°C

Section 10: STABILITY AND REACTIVITY

Stability of the Substance:	Stable under normal conditions.
Conditions to Avoid:	none known
Material to Avoid:	none known
Hazardous decomposition products	Combustion or thermal decomposition will evolve toxic and irritant vapours.
Hazardous polymerisation	Hazardous polymerisation does not occur. This material may degrade, decompose exothermically and may even catch fire, when large quantities are exposed to elevated temperatures.
Specific Data	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 -	
Swallowed:	LD ₅₀ >5000 mg/kg
Dermal absorption:	LD ₅₀ >5000 mg/kg
Inhaled:	LC ₅₀ (4 h) >5.13 mg/l
Irritation	
Eye:	NON- IRRITANT (rabbit)
Skin:	NON-IRRITANT (HSNO classification/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 ₅₀ / EC ₅₀ = 5,620 ppm (8-day dietary - bobwhite quail)
Acute toxicity to fish:	LC ₅₀ / EC ₅₀ = >121 ppm (trout)
Toxicity to Algae:	ErC ₅₀ (72 h) = 103 mg/L (Scenedesmus subspicatus)
Toxicity to aquatic Invertebrates:	LC ₅₀ / EC ₅₀ = >113 ppm (water flea)
Toxicity to soil dwelling organisms:	Eisenia foetida LC ₅₀ (14 days) = 830mg/kg.
Acute toxicity to Bees:	LD ₅₀ (48 h, contact) = 25µg/bee

Environmental Fate

The information presented here is for the active ingredient, Metalaxyl -M.
 Metalaxyl-M is stable in water. DT₅₀ >200 days. Metalaxyl -M is not persistent in soil. DT₅₀ 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.

Ecotoxicity Effects

Acute toxicity to Birds: No mortalities in mallard ducks at 6400 mg/kg and in Japanese quail at 3200mg/kg in 10 day dietary study.

Acute toxicity to fish: LC₅₀ (48 h) = 9.0 mg/L (Goldfish)
 LC₅₀ (48 h) = 2.2 mg/L (Rainbow trout)
 LC₅₀ (48 h) = 5.2 mg/L (Catfish)
 LC₅₀ (48 h) = 4.0 mg/L (Carp)

Toxicity to bees: LC₅₀ = 0.193 mg/bee

Environmental Fate

The information presented here is for the active ingredient, Mancozeb.
 Mancozeb is not persistent in water; degradation half life: 5.8-55h. Mancozeb is not persistent in soil; degradation half-life: <1 d. Mancozeb has low mobility in soil.

Section 13: DISPOSAL CONSIDERATIONS

Product Disposal: Dispose of this product only by using according to the label, or at an approved landfill or other approved facility.

Container Disposal: 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

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

Section 15: REGULATORY INFORMATION

HSNO Approval Number:	HSR000470
HSNO Controls (inc. Tracking and Record Keeping):	See http://www.epa.govt.nz/search-databases/Pages/controls-search.aspx for controls.
ACVM Registration:	P 5658
ACVM Controls:	See www.foodsafety.govt.nz/industry/acvm 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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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.