

# Material Safety Data Sheet

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Infosafe No.	3NUHA	Issue Date : December 2007	ISSUED by CRPCARE
Product Name :	<b>Medley MZ Systemic and Protective Fungicide</b>		

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

<b>Product Name</b>	Medley MZ Systemic and Protective Fungicide
<b>Product Code</b>	0917
<b>Product Type</b>	Group D Y Fungicide
<b>Company Name</b>	Crop Care Australasia Pty Ltd (ABN 53 061 362 347)
<b>Address</b>	Unit 15/16 Metroplex Avenue Murarrie Queensland 4172 Australia
<b>Emergency Tel.</b>	1800 033 498 (24hr Australia)
<b>Telephone/Fax Number</b>	Tel: +61 7 3909 2000 Fax: +61 7 3909 2010
<b>Recommended Use</b>	For control of downy mildew and certain other foliar diseases on grapevines, vegetables ornamentals, poppies and tobacco as per the Directions for Use table on the label.
<b>Other Information</b>	This MSDS describes, to the best of our knowledge, the properties of the concentrated product. The physical properties and some of the assessments do not apply to the properties of the product once it has been diluted for application. Acute health effects of the diluted product are likely to be much less severe.

## 2. HAZARDS IDENTIFICATION

<b>Hazard Classification</b>	HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. Hazard classification according to the criteria of NOHSC. Dangerous goods classification according to the Australia Dangerous Goods Code.
<b>Risk Phrase(s)</b>	R37 Irritating to respiratory system. R43 May cause sensitization by skin contact.
<b>Safety Phrase(s)</b>	S13 Keep away from food, drink and animal feeding stuffs. S2 Keep out of reach of children. S36/37/39 Wear suitable protective clothing, gloves and eye/face protection. S46 If swallowed, seek medical advice immediately and show this container or label.
<b>Other Information</b>	Poisons Schedule S5

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

<b>Chemical Characterization</b>	Solid		
<b>Ingredients</b>	<b>Name</b>	<b>CAS</b>	<b>Proportion</b>
	Other ingredients (considered non-hazardous)		30-60 %
	Metalaxyl	57837-19-1	80g/kg
	Mancozeb	8018-01-7	640g/kg

## 4. FIRST AID MEASURES

<b>Inhalation</b>	Remove affected person to fresh air until recovered. If symptoms develop or persist, seek medical advice.
<b>Ingestion</b>	If swallowed DO NOT induce vomiting. Give a glass of water. Rinse mouth and then drink plenty of water. Do not give anything by mouth to a semi-conscious or unconscious person.
<b>Skin</b>	Wash affected areas thoroughly with soap and water. Remove contaminated clothing and launder before re-use.
<b>Eye</b>	If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes. Seek medical advice if irritation develops or persists.
<b>First Aid Facilities</b>	If poisoning occurs, contact a doctor or the Poisons Information Centre

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**Advice to Doctor** (Australia) on 13 11 26.  
Treat symptomatically.  
Avoid giving alcohol - may cause vomiting and shock.

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## 5. FIRE FIGHTING MEASURES

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**Suitable Extinguishing Media** Water fog, foam, carbon dioxide or dry chemical.  
**Hazards from Combustion** Avoid strong water jets - airborne dusts may form a flammable dust cloud.  
May emit hazardous smoke and fumes if involved in fires or exposed to extreme heat.  
**Special Protective Equipment for fire fighters** Breathable air apparatus should be worn when fighting a fire in which this product is involved.  
**Other Information** STOP FIRE WATER FROM ENTERING DRAINS OR WATER BODIES.

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## 6. ACCIDENTAL RELEASE MEASURES

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**Spills & Disposal** Recover the product by sweeping up or vacuuming without raising dust. Collect spilled material and waste in sealable open-top type containers for disposal.  
DO NOT dispose of any spilled mancozeb product, no matter how small the quantity, with any combustible material such as waste paper or rags.  
**Personal Protection** For appropriate personal protective equipment (PPE), refer Section 8.

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## 7. HANDLING AND STORAGE

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**Precautions for Safe Handling** Avoid generating dusts while handling the product and mixing.  
Do NOT contaminate dams, rivers or streams, or any other water bodies with chemical or used containers.  
**Conditions for Safe Storage** Store in the closed, original container in a dry, well ventilated area, as cool as possible.  
Do not store for prolonged periods in direct sunlight.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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**National Exposure Standards** No exposure standard for this product has been set, however, an exposure standard has been set for manganese dust and compounds at 1 mg/m<sup>3</sup>.  
**Engineering Controls** Avoid generation of dust when handling solid. If dust generation is unavoidable, use forced draft to keep dust away from operator, or wear suitable dust respirator.  
**Respiratory Protection** If dusts are present, wear a class P1 dust mask.  
**Personal Protective Equipment** When opening the container, preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and goggles and disposable mist mask.  
Re-entry period: Do not enter treated area until spray has dried.  
**Hygiene Measures** After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.  
After each day's use, wash contaminated clothing and safety equipment.  
**Requirements Concerning Special Training** NSW regulations require that people who use pesticides in their job or business must have training in the application of the materials.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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**Form** Solid  
**Appearance** Off-white powder  
**Solubility in Water** Disperses in water.  
**Vapour Density (Air=1)** Mancozeb, negligible @ 25°C;  
Metalaxyl 0.75 mPa @ 25°C.  
**Octanol/Water Partition Coefficient** Kow Log P is 0.26 (mancozeb); 1.75 (metalaxyl)

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Product Name : **Medley MZ Systemic and Protective Fungicide**

**Flammability** Combustible

## 10. STABILITY AND REACTIVITY

**Chemical Stability** Stable under normal conditions.  
May decompose slowly in the presence of moisture, excessive heat or acids.

**Hazardous Polymerization** Hazardous polymerisation is not possible.

## 11. TOXICOLOGICAL INFORMATION

**Inhalation** May cause irritation to the respiratory tract if dusts are inhaled.

**Ingestion** The concentrate is of low toxicity if swallowed.

**Skin** Prolonged or repeated exposure may cause skin sensitisation.

**Eye** May irritate the eyes.

**Chronic Effects** Prolonged exposure to dust or mists containing manganese compounds can cause progressive poisoning. The signs and symptoms are apathy, loss of balance and weakness. More advanced poisoning may show evidence of central nervous system disturbance.

**Acute Toxicity - Oral** LD50 (rat) >5,000 mg/kg for mancozeb  
LD50 (rat) 633 mg/kg for metalaxyl

**Acute Toxicity - Dermal** LD50 (rat) >10,000 mg/kg for mancozeb  
LD50 (rat) >3,100 mg/kg for metalaxyl

**Acute Toxicity - Inhalation** LC50 (rat) (4hr) >5.14 mg/l for mancozeb  
LC50 (rat) (4hr) >3.6 mg/l for metalaxyl

**Other Information** The Australian Acceptable Daily Intake (ADI) for mancozeb for a human is 0.006 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.6 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Comm. Dept. of Health and Ageing, 'ADI List', TGA, September 2006).  
ADI for metalaxyl is 0.03 mg/kg/day, NOEL 3 mg/kg/day.

## 12. ECOLOGICAL INFORMATION

**Persistence / Degradability** Mancozeb is rapidly absorbed and inactivated by contact with soil.  
Half life in soil is typically 6-15 days.

**Environ. Protection** Marine pollutant.

**Acute Toxicity - Fish** LC50 (96 hr) for rainbow trout is 1.0 mg/l for mancozeb  
LC50 (96 hr) for rainbow trout is >100 mg/l for metalaxyl

**Acute Toxicity - Daphnia** EC50 (48hr) for daphnia magna is 3.8 mg/l for mancozeb.  
EC50 (48hr) for daphnia magna is >28 mg/l for metalaxyl.

**Acute Toxicity - Algae** EC50 (120hr) for Selenastrum capricornutum 0.044 mg/l for mancozeb.  
IC50 (5d) Scenedesmus subspicatus is 33 mg/l for metalaxyl.

**Acute Toxicity - Other Organisms** Not toxic to birds.  
Not toxic to bees.

## 13. DISPOSAL CONSIDERATIONS

**Product Disposal** On site disposal of the concentrated product is not acceptable. Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities who hold periodic collections of unwanted chemicals (ChemClear®).

**Container Disposal** Shake the last amount of product from the container into the application equipment.  
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.

## 14. TRANSPORT INFORMATION

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<b>Storage and Transport</b>	Considered non dangerous for transport by the Australian Code for the Transport of Dangerous Goods by Road and Rail.
<b>UN Number (Sea Transport)</b>	3077
<b>IMO Class/Packing Group</b>	Class 9
<b>IMO Marine Pollutant</b>	Marine Pollutant
<b>IMO Proper Shipping Name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains mancozeb)

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## 15. REGULATORY INFORMATION

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<b>Poisons Schedule</b>	S5
<b>Packaging &amp; Labelling</b>	CAUTION KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
<b>Hazard Category</b>	Irritant
<b>AICS (Australia)</b>	All of the components in this product are listed on the Australian Inventory of Chemical Substances.

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## 16. OTHER INFORMATION

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<b>Date of preparation or last revision of MSDS</b>	11/12/2007
<b>Contact Person/Point</b>	Normal Hours: Mr Volker Maier                      Phone: (03) 9282 1000 After Hours: Shift Supervisor                      Phone: 1800 033 498
<b>Revisions Highlighted</b>	First Issue  ...End Of MSDS...