

Material Safety Data Sheet

MIRANO 50 WG L 8845 (Act 36 of 1947)

Date of issue: 30/03/2010

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1) PRODUCT AND COMPANY IDENTIFICATION	
Product name:	MIRANO 50 WG
Other means of identification:	Cyprodinil 500 g/kg WG
Recommended use:	Fungicide
Restrictions on use:	Agriculture
UN No:	UN 3077
Distributed by:	MERIDIAN AGRITECH P O BOX 436 MODDERFONTEIN TEL 011 8228509 FAX 0866901386 MOBILE: 083 400 6056 www.agritech.co.za
Emergency Number:	POISON CENTRE (UNITAS HOSPITAL) 012 664 1100 TYGERBERG:021 931 6129 RED CROSS 021 689 5227 GRIFFON POISON CENTRE: 082 446 8946.
Chemical Name:	Anilinopyrimidine
2) Hazards Identification:	
Product Classification:	N; R40 Full text of phrases; see section 15
Label Elements:	Hazard symbols: N – Dangerous to the environment 
Health effects: eyes:	Slight irritant to eye
Health effects: skin:	Slight irritant to skin
Health effects: ingestion:	Harmful if swallowed
Health effects: inhalation:	Harmful if inhaled
3) Composition Details:	
Cyprodinil	500 g/kg
4) First aid measures	
Product in eyes:	Irrigate immediately with water for at least 15 minutes.

Product on skin:	Wash off in flowing water or shower, use soap if available
Product ingested:	If more than 15 minutes from emergency medical care induce vomiting preferably using Ipecac Syrup (APF)
Product inhaled:	Remove to fresh air. Consult a physician.
Further medical treatment:	No specific antidote. Supportive care. Treatment based on judgement of physician in response to symptoms of patient.
5) Fire-Fighting Measures:	
Extinguishing media:	Water fog or fine spray.
Specific firefighting methods:	Keep containers cool by spraying with water. Contain run off to prevent entry into water or drainage systems.
Special hazards:	During a fire, smoke may contain the original material in addition to unidentified toxic and/or irritating compounds
Protective clothing:	Wear protective clothing and use self-contained breathing apparatus.
6) Accidental Release Measures:	
Personal precautions:	
Wear appropriate safety clothing and eye/face protection. Environmental Precautions: Do not wash into sewers or into any body of water. Advise water authority if spillage has entered water course or drainage system.	
Environmental precautions:	
Do not contaminate waterways, drains and groundwater. If contamination of waterways, drains, rivers or lakes is unavoidable, warn the local authorities (Police and Department of Water/Environmental affairs) immediately.	
Cleaning procedure:	
Keep all bystanders away. Re-position any leaking containers so as to minimise further leakage. For product spill sweep granule concentrate into a pile. Shovel the absorbed material into drums. Decontaminate the spill area with detergent and water and rinse with water.	
Disposal:	
Triple rinse with water. Add rinsings to the tank mix or expose of rinsate in a disposal pit away from desirable plants and their roots and watercourses. On-site disposal of undiluted product is unacceptable. Breaking, crushing or puncturing the container to prevent reuse. Disposing of in a local authority landfill site that does not burn its refuse. If there is no local authority landfill readily available in your area bury the containers under at least 50 cm of soil at an approved disposal site. Do not burn the empty containers.	

7) Handling & Storage:
Handling:
Avoid product getting in eyes, skin or clothing. Do not inhale dust. Do not eat, drink or smoke whilst mixing or applying or before hands and face have been washed. Clean applicator and measuring equipment before using with other products and dispose of wash water where it will not contaminate crops, grazing, rivers and dams. Remove contaminated clothing and wash thoroughly after handling. Wear clean clothes each day and launder before re-using.

Storage:

Store in tightly sealed containers in a dry secure place away from fertilizers, seed, feed and food. Store out of direct sunlight. Keep out of reach of children, unauthorized persons or animals

8) Exposure Control / Personal Protection:

It is essential to provide adequate ventilation. The measures appropriate for a particular work site depend on how this material is used and on the extent of exposure. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

Occupational Exposure Limits: Not available

Engineering Controls: Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust or process enclosure ventilation system.

Personal Protective Equipment:**Respiratory Protection:**

For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

Hand/Skin Protection:

Wear clean, long-sleeved, body-covering clothing. Use gloves, impervious to this material when prolonged or frequently repeated contact could occur.

Eye/Face Protection:

Use safety glasses.

For emergency conditions:

Use protective clothing impervious to this material. Selection of specific items will depend on operation. Where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

9) Physical & Chemical Properties:

Appearance:	Solid granules
Colour:	Beige to brown
Odour:	Weak, uncharacteristic
Boiling point:	Not available
Density:	0.48 g /m3
pH:	7-11
Solubility:	Dispersible
Odour threshold:	Not available
Melting point / Freezing point	75.9°C (Cyprodinil)
Flash point:	Not available
Evaporation rate:	Not available
Flammability (solid, gas)	Not available
Upper/ lower flammability or explosive limits:	Not available
Vapour pressure:	0.51 mPa @ 25°C (Cyprodinil)
Vapour density:	Not available
Relative density:	Not available
Partition coefficient: n-octanol/water	Log K _{ow} 4.0 (Cyprodinil)
Auto-ignition temperature:	Not available
Viscosity:	Not applicable

10) Stability & Reactivity:

Stability	Stable under normal conditions
Conditions to avoid:	None known

Incompatible materials:	Incompatible when added to liquid formulations but not if mixed in reverse order.
Hazardous decomposition product(s):	Oxides of carbon, oxides of nitrogen
11) Toxicological Information:	
Acute and chronic health hazards	<p>Ingestion Single dose oral toxicity is considered to be low. The oral LD50 for rats is >2000 mg/kg.</p> <p>Skin Contact The dermal LD50 for rats is >2000mg/kg. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts. Essentially non-irritating to skin.</p> <p>Sensitisation Non-sensitising to guinea pig skin.</p> <p>Eye Contact May cause slight transient (temporary) eye irritation.</p> <p>Inhalation Assessment largely or completely based on data for active ingredient. No adverse effects anticipated by this route of exposure incidental to proper handling. No cases of human poisoning are on record.</p>
12) Ecological Information:	
<p>Ecological information:</p> <p>Environmental fate:</p>	<p>Birds LD50 for mallard ducks >500, bobwhite quail >2000 mg/kg. LC50 (8 d) for mallard ducks and bobwhite quail >5200 ppm. Fish LC50 (96 h) for rainbow trout 2.41 mg/l, bluegill sunfish 2.17 mg/l (static) and 3.2 mg/l (flowthrough). Daphnia EC50 (48 h) 0.033 mg/l. Algae EbC50 (72 h) for <i>Selenastrum capricornutum</i> 5.2 mg/l.</p> <p>Other aquatic spp. EC50 for <i>Lemna gibba</i> 7.71, <i>Gammarus</i> sp. 1.8, <i>Ostracoda</i> 1.1, <i>Simocephalus vetulus</i> 0.15, <i>Tamnocephalus</i> 0.12 mg/l. Bees LD50 (48 h, oral and contact) >100 µg/bee. Worms LC50 (14 d) for <i>Eisenia foetida</i> 192 mg/kg. Other beneficial spp. Harmless to <i>Aleochara bilineata</i>, <i>Coccinella septempunctata</i>, <i>Aphidius rhopalosiphi</i>, <i>Poecilus cupreus</i> and <i>Episyrphus</i>.</p> <p>Animals After oral administration, cyprodinil is rapidly absorbed and almost completely eliminated with urine and faeces. Metabolism proceeds by 4-hydroxylation of the phenyl and 5-hydroxylation of the pyrimidine rings, followed by mono- or di-sulfation. Residues in tissues were generally low and there was no evidence for accumulation or retention of cyprodinil or its metabolites.</p> <p>Plants Metabolism proceeded mainly via hydroxylation of the 6-methyl group of the pyrimidine ring, as well as hydroxylation of the phenyl and pyrimidine rings, followed by sugar conjugation.</p> <p>Soil/Environment In soil, the compound dissipated with DT50 20–60 d at normal soil humidities and soil temperatures, whereby formation of bound residues represents the major route for dissipation. In leaching and adsorption/desorption experiments, the compound proved to be immobile in soil. Photolytic DT50 in water 13.5 d.</p>

13) Disposal considerations:	Do not use this container for any other purpose. Triple rinse containers, add rinsate to the spray tank, then offer the container for recycling/reconditioning, or puncture top, sides and bottom and dispose of in landfill in accordance with local regulations. If on-site container disposal is necessary, triple rinse empty container with water, add rinsate to the spray tank. Puncture top, sides and bottom, crush and bury in an approved landfill. Empty containers and product should not be burnt
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14) Transportation Information:	
IMO hazardous description: Road, Rail & Barge Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Contains Cyprodinil) Truck - Label: 9 Rail - Label: 9 Barge - Label: 9 UN Number: 3077 Sea Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Contains Cyprodinil) Sea - IMO/IMDG Class: 9 UN Nr: 3077 Label: 9 Packing Group: III Marine Pollutant: N (Y) Air Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Contains Cyprodinil) Air-ICAO/IATA Class : 9 UN Nr : 3077 Label: 9 Packing Group: III Pack Instr. Passenger: 914 Pack Instr. Cargo: 914 Remarks: Sample shipment not allowed by mail.	

15) Regulatory Information:	
Contains: Cyprodinil Symbol(s): N – Dangerous to the environment R-phrases(s): R40 – Limited evidence of a carcinogenic effect. S-phrases(s): S2 – Keep out of reach of children. S13 – Keep away from food, drink and animal feeding stuffs. S20/21 – When using, do not eat, drink or smoke. S24/25 – Avoid contact with skin and eyes. S60 – This material and its container must be disposed of as hazardous material. S61 – Avoid release to the environment. Refer to special instructions/Safety data sheets.	

16. Other Information All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with this product. If the recipient subsequently produces formulation(s) containing this product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS. The information contained herein is provided in good faith but makes no representation as to its comprehensiveness or accuracy. A properly trained person using this product intends document only as a guide to the appropriate handling of the material. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. MERIDIAN AGRITECH MAKES NO REPRESENTATION OR WARRANTIES, EITHER EXPRESSES OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANT ABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, MERIDIAN AGRITECH WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.
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