


Safety Data Sheet

MIRANO 50 WG L8845 (Act 36 of 1947)

1) PRODUCT AND COMPANY IDENTIFICATION	
Product name:	MIRANO 50 WG
Other means of identification:	Cyprodinil 500 g/kg WG
Chemical Name:	4-cyclopropyl-6-methyl-N-phenylpyrimidin-2-amine
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.
2) HAZARDS IDENTIFICATION	
Classification of the substance/mixture:	Acute Toxicity (Oral) Category 4 Acute Toxicity (Dermal) Category 4 Acute Toxicity (Inhalation) Category 4 Skin Irritation Category 3 Eye Damage Category 1 Skin Sensitization Category 1 Aquatic Acute Category 1 Aquatic Chronic Category 1
Label Elements: Globally Harmonized System, EU (GHS):	<p>Pictograms:</p>  <p>Signal word: Danger</p> <p>Hazard Statements: H228: Flammable solid. H302: Harmful if swallowed. H315: Causes skin irritation. H317: May cause an allergic skin reaction. H318: Causes serious eye damage. H332: Harmful if inhaled. H335: May cause respiratory irritation. H400: Very toxic to aquatic life. H410: Very toxic to aquatic life with long-lasting effects. H412: Harmful to aquatic life with long-lasting effects.</p> <p>Precautionary Statements: P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P260: Do not breathe dust/mist/spray. P262: Do not get in eyes, on skin, or on clothing. P270: Do not eat, drink or smoke when using the product.</p>

According to Directive 67/548/EEC No. 1272/2008 [CLP]

P272: Contaminated work clothing should not be allowed out of the workplace.
P273: Avoid release to the environment.
P280: Wear protective gloves, protective clothing, eye protection.
P321: Specific treatment (See First aid measures on this label)
P362+P364: Take off contaminated clothing and wash it before reuse.
P405: Store locked up.

Hazard Symbol(s):

Xn – dangerous to health
Xi - Irritant
N – dangerous for the environment

R-phrases(s):

R43: May cause sensitization by skin contact.
R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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.

3) COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances:

Not applicable

3.2 Mixtures:

Chemical name	Concentration	CAS No.	EC No.	Classification according to Regulation EC 1272/2008 (CLP)
Cyprodinil	50%	121552-61-2	601-785-8	Skin Sens. 1 (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Sodium dodecyl sulphate	6%	151-21-3	205-788-1	Acute Tox 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Aquatic Chronic 3 (H412) Flam. Sol. 2 (H228) Acute Tox 4 (H332) STOT SE 3 (H335, inhalation)

4) FIRST AID MEASURES

Description of First-Aid Measures:

Inhalation:

Remove to victim to fresh air. Keep patient warm and at rest. If breathing is irregular or has stopped, administer artificial respiration. Consult a physician immediately.

Skin contact:

Take off all contaminated clothing immediately. Wash off in flowing water or shower, use soap if available. If irritation persists, contact a physician.

Eye contact:

Rinse immediately with water for at least 15 minutes, holding eyelids open. Remove contact lenses. Consult a physician immediately.

Ingestion:


Seek medical advice immediately and show this container or label. Do NOT induce vomiting, unless instructed to do so by a healthcare physician.

Most important symptoms and effects, both acute and delayed:

None known.

Indication of any immediate medical attention and special treatment needed:	No specific antidote. Supportive care. Treatment based on judgement of physician in response to symptoms of patient.
5) FIRE-FIGHTING MEASURES	
Extinguishing Media: Unsuitable Extinguishing Media: Specific Hazards arising from the substance/mixture: Fire Fighting: Protective clothing:	<p>Water fog or fine spray.</p> <p>Do not use high volume water jet, due to contamination risk</p> <p>During a fire, smoke may contain the original material in addition to unidentified toxic and/or irritating compounds.</p> <p>Remove spectators from surrounding area. Isolate the fire area and evacuate downwind. Use a recommended extinguishing agent for the type of surrounding fire. Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Contain fire control agents for later disposal.</p> <p>Avoid inhaling hazardous vapours and fumes from burning materials. Keep upwind. Remove container from fire area if possible and without risk. Water can be used to cool unaffected containers but must be contained for later disposal. Do not scatter the material. Avoid pollution of waterways.</p> <p>Wear protective clothing and use self-contained breathing apparatus.</p>
6) ACCIDENTAL RELEASE MEASURES	
Personal precautions, protective equipment and emergency procedures: Environmental precautions: Methods and material for containment and cleaning up:	<p>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.</p> <p>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.</p> <p>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.</p>
7) HANDLING & STORAGE	
Precautions for Safe Handling: Conditions for Safe Storage, including any incompatibilities:	<p>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.</p> <p>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</p>
8) EXPOSURE CONTROL / PERSONAL PROTECTION	
Appropriate Engineering Controls:	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. Ventilation equipment should be explosion-resistant if

Control Parameters: Occupational exposure limits:	explosive concentrations of material are present. Provide local exhaust or process enclosure ventilation system.			
	Ingredient	CAS#	Limit	Basis
	Cyprodinil	121552-61-2	5 mg/m³	TWA (Syngenta)
	Sodium dodecyl sulphate	151-21-3	4 mg/m³	TWA (EH40/2005)
<u>PERSONAL PROTECTIVE EQUIPMENT:</u>				
Clothing:	Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with this substance.			
Respiratory protection:	For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.			
Gloves:	Employee must wear appropriate chemical-resistant gloves to prevent contact with this substance.			
Eye protection:	The use of safety goggles with side shields is recommended.			
Emergency eye wash:	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				
Form:	Granules			
Colour:	Beige to brown			
Odour:	Weak, uncharacteristic			
Solubility:	Dispersible			
pH:	7-11			
Odour threshold:	Not available			
Melting point / Freezing point	75.9°C (Cypodinil)			
Initial boiling point and boiling range	Not available			
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:	0.48 g /m3			
Partition coefficient: n-octanol/water	Log K _{ow} 4.0 (Cyprodinil)			
Auto-ignition temperature:	Not available			
Decomposition Temperature:	Not available			
Viscosity:	Not applicable			
10) STABILITY & REACTIVITY				
Reactivity:	No hazardous reactions if stored and handled as indicated.			
Chemical Stability:	When stored appropriately this product should show no significant degradation for 2 years from the date of manufacture.			
Possibility of hazardous reactions:	None known.			
Conditions to avoid:	Avoid high temperatures.			
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 Toxicity: Oral: Dermal: Inhalation:	LD50 for rats is >2000 mg/kg. LD50 for rats is >2000mg/kg. LC50 >1.2 mg/kg (4h), rat.
Skin Corrosion/Irritation:	Essentially non-irritating to skin.
Serious Eye Damage/Irritation:	May cause slight transient (temporary) eye irritation.
Respiratory or Skin Sensitization:	Non-sensitising to guinea pig skin.
Germ Cell Mutagenicity:	Animal testing did not show any mutagenic effects
Carcinogenicity:	No evidence of carcinogenicity in animal studies.
Reproductive Toxicity:	No toxicity to reproduction
STOT-SE:	No data available.
STOT-RE:	No data available.
Aspiration Hazard:	No data available.
12) ECOLOGICAL INFORMATION	
Ecotoxicity: Birds: Fish: Daphnia: Algae: Worms: Bees:	Acute LD50 mallard ducks > 500 mg/kg. LC50 (96 h) rainbow trout 2.41 mg/L, bluegill sunfish 2.17 mg/L. EC50 (48 h) 0.033 mg/L. EC50 (72 h) <i>Pseudokirchneriella subcapitata</i> 2.6 mg/L. LC50 (14 d) <i>Eisenia foetida</i> 192 mg/kg. LD50 (48 h) > 100 µg/bee (oral and contact).
Persistence and Degradability:	In soil, the compound dissipated with DT ₅₀ 20–60 d at normal soil humidity and temperature, whereby formation of bound residues represents the major route for dissipation. Photolytic DT ₅₀ in water 13.5 d.
Bio-accumulative Potential:	No evidence of accumulation.
Mobility in Soil:	In leaching and adsorption/desorption experiments, the compounds proved to be immobile in soil.
13) DISPOSAL CONSIDERATIONS	
Waste Disposal:	On-site disposal of undiluted product is unacceptable. In accordance with local and national regulations. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Do not contaminate water, food or feed by disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved chemicals waste disposal facility.
Container Disposal:	Do not use this container for any other purpose. Triple rinse containers and 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 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. Empty containers and product should not be burnt.
14) TRANSPORTATION INFORMATION	
Road Transport ADR / IRD:	UN NUMBER: 3077 UN Proper Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Cyprodinil) Transport Hazard Class: 9 Miscellaneous Dangerous Goods Packaging group: III Labelling no: 9 Environmental Hazards: Not applicable Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling.
Maritime Transport IMDG / IMO:	UN NUMBER: 3077 UN Proper Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Cyprodinil) Transport Hazard Class: 9 Miscellaneous Dangerous Goods Packaging group: III Labelling no: 9 Environmental Hazards: Marine Pollutant Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling. 

Air Transport ICAO / IATA:	UN NUMBER: 3077 UN Proper Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Cyprodinil) Transport Hazard Class: 9 Miscellaneous Dangerous Goods Packaging group: III Labelling no: 9 Environmental Hazards: Not applicable Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling.
Transport in Bulk (according to Annex II of MARPOL 73/78 and the IBC Code):	No transport in bulk according to the IBC Code.
15) REGULATORY INFORMATION	
Safety, health and environmental regulations/legislation specific for the substance/mixture:	For the user of this plant-protective product applies: 'To avoid risks to man and the environment, comply with the instructions for use.' (Directive 1999/45/EC, Article 10, No. 1.2)
Chemical Safety Assessment:	Advice on product handling can be found in sections 7 and 8 of this safety data sheet.
16) OTHER INFORMATION	
<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>Date of issue: 30/03/2010 Date of revision: 28/04/2016, 14/01/2021</p> <p>Abbreviations and acronyms:</p> <ol style="list-style-type: none"> 1. CAS number: Chemical Abstracts Service number. 2. CLP: Classification, Labelling, Packaging. 3. LD₅₀: Lethal Dose for 50% of the test population. 4. LC₅₀: Lethal Concentration for 50% of the test population. 5. DT₅₀: Half-life. 6. GHS: Globally Harmonised System (of Classification and Labelling of Chemicals). 7. STOT: Specific Target Organ Toxicity 8. SE: Single exposure 9. RE: Repeated exposure 10. TWA: Time-weighted average. <p>Literature References:</p> <ul style="list-style-type: none"> • GHS: www.ccohs.ca/oshanswers/chemicals/ghs.html • ECHA: https://echa.europa.eu/search-chemicals 	