


Safety Data Sheet

BISTRO 250 SC L9245 (Act 36 of 1947)

1) PRODUCT AND COMPANY IDENTIFICATION	
Product name:	BISTRO 250 SC
Other means of identification:	Azoxystrobin, Kresoxim-methyl 250 SC
Chemical Name:	methyl (E)-2-{2-[6-(2-cyanophenoxy)pyrimidin-4yloxy]phenyl}-3-methoxyacrylate (IUPAC) methyl (E)-methoxyimino[2-(otolyloxymethyl)phenyl]acetate (IUPAC)
Recommended use:	Fungicide
Restrictions on use:	Agriculture
UN No:	3082
Distributed by:	MERIDIAN AGRITECH P O BOX 436 MODDERFONTEIN TEL 011 8228509 FAX 0866901386 MOBILE: 0834006056 www.agritech.co.za
Emergency Number:	POISON CENTRE (UNITAS HOSPITAL) 012 664 1100 TYGERBERG:021 931 6129 RED CROSS 021 689 5227 RAPID SPILL RESPONSE 0800 775 3305
2) HAZARDS IDENTIFICATION:	
Classification of the substance/mixture:	GHS Category: Oral: Category 5 Dermal: Category 5 Aquatic Acute Cat 1 (H400) Aquatic Chronic Cat 1 (H410) Carc Cat 2 (H351) Skin Irrit Cat 2 (H315) Eye Irrit Cat 2 (H319)
Label Elements: Globally Harmonized System, EU (GHS):	<p>Pictogram:</p>  <p>Signal word: Warning</p> <p>Hazard Statements: H302: Harmful if swallowed. H315: Causes skin irritation. H319: Causes serious eye irritation. H331: Toxic if inhaled. H351: Suspected of causing cancer. H400: Very toxic to aquatic life. H410: Very toxic to aquatic life with long-lasting effects.</p> <p>Precautionary Statements: P102: Keep out of reach of children. P260: Do not breathe dust/fumes/gas/mist/vapours/spray. P262: Do not get in eyes, on skin, or on clothing. P270: Do not eat, drink or smoke when using this product. P271: Use only outdoors or in a well-ventilated area. P273: Avoid release to the environment.</p>

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

Hazard symbols:
 N: Dangerous to the environment.
 Xi: Irritant.
 Xn: Harmful.

R-phrase(s):

R22: Harmful if swallowed.
R23: Toxic by inhalation.
R36/37/38: Irritating to eyes, respiratory system and skin.
R45: May cause cancer.
R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s):

S1/2: Keep locked up and out of reach of children.
S3: Keep in a cool place.
S7: Keep container tightly closed.
S13: Keep away from food, drink and animal feeding stuffs.
S20/21: When using, do not eat, drink or smoke.
S23: Do not breathe vapour/spray.
S24/25: Avoid contact with the skin and eyes.
S28: After contact with skin, wash immediately with plenty of water.
S35: This material and its container must be disposed of in a safe way.
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.
S38: In case of insufficient ventilation, wear suitable respiratory equipment.
S46: If swallowed, seek medical advice immediately and show this container.
S57: Use appropriate containment to avoid environmental contamination.
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)
Azoxystrobin	225 g/L	131860-33-8	603-524-3	Acute Tox Cat 3 (H331) Aquatic Acute Cat 1 (H400) Aquatic Chronic Cat 1 (H410)
Kresoxim-methyl	25 g/L	143390-89-0	604-351-6	Carc Cat 2 (H351) Aquatic Acute Cat 1 (H400) Aquatic Chronic Cat 1 (H410)
Denatonium benzoate in Monoethylene glycol	50 g/L		906-307-4	Acute Tox Cat 4 (H302)
Morwet EFW	20 g/L	105864-15-1	600-693-5	Skin Irrit Cat 2 (H315) Eye Irrit Cat 2 (H319)

4) FIRST AID MEASURES:

Description of First-Aid Measures:

Inhalation:

Remove patient to fresh air. Loosen clothing around neck. Lie down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear and apply resuscitation. Seek medical assistance immediately.

<p>Skin contact:</p> <p>Eye contact:</p> <p>Ingestion</p> <p>Most important symptoms and effects, both acute and delayed:</p> <p>Indication of any immediate medical attention and special treatment needed:</p>	<p>Immediately remove contaminated clothing and flush body and clothes with large amounts of water. Wash contaminated clothing before re-use. Seek medical assistance if irritation persists.</p> <p>Flush eyes with plenty of water for at least 15 minutes holding eyelids open. Remove contact lenses. Seek medical assistance immediately.</p> <p>Never give anything by mouth to an unconscious person. Do not induce vomiting. For advice, contact the National Poisons Centre. Seek medical assistance immediately.</p> <p>To date no symptoms are known.</p> <p>No specific antidote known. Treat symptomatically and supportively.</p>
<p>5) FIRE-FIGHTING MEASURES:</p>	
<p>Extinguishing Media:</p> <p>Unsuitable Extinguishing Media:</p> <p>Specific Hazards arising from the substance/mixture:</p> <p>Fire Fighting:</p> <p>Protective clothing:</p>	<p>Small fires: Carbon dioxide, dry chemical powder, water spray or alcohol-resistant foam</p> <p>Large fires: Alcohol-resistant foam or water spray.</p> <p>DO NOT use a direct jet of water</p> <p>This product consists of combustible organic components that may burn and decompose during a fire and produce a dense black smoke with hazardous combustion products. These products are toxic and/or irritant. Exposure to decomposition products may be a health hazard</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>Full protective clothing and self-contained breathing apparatus</p>
<p>6) ACCIDENTAL RELEASE MEASURES:</p>	
<p>Personal precautions, protective equipment and emergency procedures:</p> <p>Environmental precautions:</p> <p>Methods and material for containment and cleaning up:</p>	<p>Avoid contact with skin and eyes. For personal protection see Section 8.</p> <p>Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. Do not allow to enter drains or watercourses. If contamination of water courses is unavoidable, report to the Police and the Department of Water/Environmental Affairs immediately.</p> <p>Clear area of unprotected personnel. Wear protective gear: goggles. Half face-piece respirator with combined dust and vapour cartridge, full length clothing and PVC gloves. Reposition leaking containers to minimize further leakage. Contain and collect spillage with a non-combustible absorbant (e.g. sand, earth, diatomaceous earth, vermiculite) Decontaminate the spillage area with water and detergent, then rinse with water.</p> <p>If the product contaminates water sources, inform the respective authorities.</p>
<p>7) HANDLING & STORAGE:</p>	

<p>Precautions for Safe Handling:</p> <p>Conditions for Safe Storage, including any incompatibilities:</p>	<p>Avoid skin and eye contact. Thus Harmful if swallowed. Wash hands thoroughly with soap and water before breaks and immediately after handling the product. Do not eat, drink, smoke or apply cosmetics when there is a possibility of exposure to the product. Wash goggles or face shield and contaminated clothing thoroughly after each day's use.</p> <p>Store in original container tightly closed and in a locked, dry, cool, well-ventilated area away from foodstuffs, fertilisers and seeds. Do not freeze. Keep away from children or uninformed persons. Keep away from food, drink and animal feed.</p>
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8) EXPOSURE CONTROL / PERSONAL PROTECTION:

Appropriate Engineering Controls:

Control Parameters: Occupational exposure limits:

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.

Ingredient	CAS#	Limit	Basis
Azoxystrobin	131860-33-8	2 mg/m ³	8 h TWA
Kresoxim-methyl	143390-89-0	NA	NA

PERSONAL PROTECTIVE EQUIPMENT:

Clothing:

Consult supplier to confirm that the equipment is suitable.

When opening the container and preparing the spray wear the following protection:
Cotton overalls buttoned up to the neck and wrist (or equivalent clothing)
Elbow length PVC gloves
Goggles or face shield

Respiratory protection:

Wear respirator with filter if ventilation is inadequate or exposure to high levels are likely.

Gloves:

Employee must wear appropriate chemical-resistant gloves to prevent contact with this substance

Eye protection:

The use of face shields or 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:

Appearance:	White to cream-white liquid
Odour:	Characteristic
Solubility:	Suspends in water
pH:	6.0-7.5
Odour threshold:	Not available
Melting point / Freezing point	Not available
Initial boiling point and boiling range	Not available
Flash point:	Does not flash
Evaporation rate:	Not available
Flammability (solid, gas)	Not flammable
Upper/ lower flammability or explosive limits:	Not available
Vapour pressure:	Not available
Vapour density:	Not available
Relative density:	1.001
Partition coefficient: n-octanol/water	Not available

Auto-ignition temperature:	Not available
Decomposition Temperature:	Not available
Viscosity:	Not available
10) STABILITY & REACTIVITY:	
Reactivity: Chemical Stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition product(s):	No hazardous reactions if stored and handled as indicated. When stored appropriately this product should show no significant degradation for 2 years from the date of manufacture. No hazardous reactions if stored and handled as indicated. Avoid prolonged exposure to direct sunlight and extreme temperatures. None known None known
11) TOXICOLOGICAL INFORMATION:	
Acute Toxicity:	
Oral:	LD50 > 2000
Dermal:	LD50 > 4 000 mg/kg, rabbit.
Inhalation:	LC50 (4h) 2.5 mg/L, rat.
Skin Corrosion/Irritation:	Moderate irritant, rabbit.
Serious Eye Damage/Irritation:	Moderate irritant, rabbit.
Respiratory or Skin Sensitization:	Did not cause sensitization on laboratory animals, guinea pig.
Germ Cell Mutagenicity:	No data available
Carcinogenicity:	No data available
Reproductive Toxicity:	No data available
STOT-SE:	No data available
STOT-RE:	No data available
Aspiration Hazard:	No data available
12) ECOLOGICAL INFORMATION:	
Ecotoxicity:	
Birds:	Acute oral LD50 for bobwhite quail >5000, mallard ducks >5000 mg/kg.
Fish:	LC50 (96 h) for rainbow trout 2.0, Blue gill sunfish: >3.0
Daphnia:	EC50 (48 h) 331.8 µg/L
Algae:	-
Worms:	LC50 >1200 mg/kg dry soil.
Bees:	90 µg/bee oral, >400 µg/bee contact.
Other:	-
Persistence and Degradability:	Azoxystrobin: Average DT50 (lab.) 8 w (20 °C, pH 2). In soil, in the dark, six identified metabolites were formed; over 1 y, 45% of applied radiolabel is evolved as CO2. Dissipation in the field is faster, average DT50 2 w, DT90 41 w. On soil, photolysis DT50 11 d. Kresoxim-methyl: Rapidly degraded; in aerobic soil, or under aerobic or anaerobic aquatic metabolism, DT50 <1 d. In soil, DT90 (lab.) <3 d; the main metabolite is the corresponding acid.
Bioaccumulative Potential:	No data available
Mobility in Soil:	Azoxystrobin and its degradates have low to moderate mobility in soil; typical Koc for azoxystrobin c. 500. Kresoxim-methyl: Very mobile in soil; Koc 219–372; Koc of the acid 17–24. However, in lysimeter studies, only low levels of kresoxim-methyl and its metabolite were found in leachates (R. Becker-Arnold & R. T. Hamm, <i>Proc. 9th IUPAC Int. Congr. Pestic. Chem.</i> , London, 1998, 2, 6D-017).
13) DISPOSAL CONSIDERATIONS:	
Waste Disposal:	In accordance with local and national regulations. Recycling is preferable. 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:	Contaminated packaging should be disposed of as product waste. Empty containers can be land-filled after cleaning in accordance with local and national regulations.

	Do not transport if this container is damaged or leaking. Do not re-use empty containers.
14) TRANSPORTATION INFORMATION:	
Road Transport ADR / IRD:	UN NUMBER: 3082 UN Proper Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, Liquid, N.O.S. (Azoxystrobin, Kresoxim-methyl) 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: 3082 UN Proper Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, Liquid, N.O.S. (Azoxystrobin, Kresoxim-methyl) 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:	Not applicable
Transport in Bulk (according to Annex II of MARPOL 73/78 and the IBC Code):	Not applicable
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 Safety Data Sheet (SDS) are based on the current state of scientific and technical knowledge at the date indicated on the present SDS 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 SDS 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 SDS to their own SDS.</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 this 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 (PTY) LTD WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.</p> <p>Date of issue: 30/05/2013 Date revised: 02/03/2018 Abbreviations: None Literature References:</p> <ul style="list-style-type: none"> GHS: www.ccohs.ca/oshanswers/chemicals/ghs.html ECHA: https://echa.europa.eu/search-chemicals 	