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Meridian agritech

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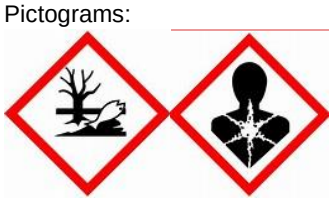
FLUZOXY L10731 (Act 36 of 1947)

1) PRODUCT AND COMPANY IDENTIFICATION	
Product name:	FLUZOXY
Other means of identification:	Azoxystrobin 125 g/L, Flusilazole 125 g/L SE
Chemical Name:	Azoxystrobin(IUPAC): methyl (*E*)-2-{2-[6-(2-cyano-phenoxy)pyrimidin-4-yloxy]phenyl}-3-methoxyacrylate Flusilazole (IUPAC): 1-[[bis(4-fluorophenyl)(methyl)silyl]methyl]-1*H*-1,2,4-triazole, bis(4-fluorophenyl)(methyl)(1*H*-1,2,4-triazol-1-ylmethyl)silane
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 GRIFFON POISON CENTRE: 082 446 8946
2) HAZARDS IDENTIFICATION:	
Classification of the substance/mixture:	Acute Toxicity (Oral) Category 4 Acute Toxicity (Inhalation) Category 3 Eye Irritation Category 1 Carcinogenicity Category 2 Reproductive Toxicity Category 1B Aquatic Acute Category 1 Aquatic Chronic Category 1
Label Elements: **Globally Harmonized System, EU (GHS):**	Pictograms:  Signal word: Harmful **Hazard Statements:** **H302:** Harmful if swallowed. **H319:** Causes serious eye irritation. **H331:** Toxic if inhaled. **H351:** Suspected of causing cancer. **H360d:** May damage fertility or the unborn child.

	H400: Very toxic to aquatic life. **H410:** Very toxic to aquatic life with long-lasting effects. **H411:** Toxic to aquatic life with long-lasting effects. **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 mist/fumes/vapours/spray. **P262:** Do not get in eyes, on skin, or on clothing. **P263:** Avoid contact during pregnancy or while nursing. **P270:** Do not eat, drink or smoke when using the product. **P271:** Use only outdoors or in a well-ventilated area. **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.
According to Directive 67/548/EEC No. 1272/2008 [CLP]	**Hazard symbols:** **Xn:** Harmful **Xi:** Irritant **N:** Dangerous for the environment. **T:** Toxic to aquatic organism. **R-phrase(s):** **R22:** Harmful if swallowed. **R23:** Toxic by inhalation. **R36/37/38:** Irritating to eyes, respiratory system and skin. **R51/53:** 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. **S13:** Keep away from food, drink and animal feeding stuffs. **S23:** Do not breathe vapour/spray. **S24/25:** Avoid contact with the skin and eyes. **S36/37/39:** Wear suitable protective clothing, gloves and eye/face protection. **S46:** If swallowed, seek medical advice immediately and show this label. **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	Composition	CAS No.	EC No.	Classification according to Regulation EC 1272/2008 (CLP)	Classification according to 67/548/EEC
Azoxystrobin	125 g/L	131860-33-8		Acute Tox Cat 3 (H331) Aquatic Acute Cat 1 (H400) Aquatic Chronic Cat 1 (H410)	T, N; R23, R50/53; S1/2, S227, S45, S60, S61

Flusilazole	125 g/L	85509-19-9		Acute Tox Cat 4 (H302) Carc Cat 2 (H351) Repr. Cat 1B (H360D) Aquatic Chronic 2 (H411)	T, N; 22, R40, R61, R51/53; S45, S53, S61
Denatonium benzoate in Monoethylene glycol	50 g/L		906-307-4	Acute Tox Cat. 4 (H302)	
Acetophenone	50 g/L	98-86-2	202-708-7	Acute Tox Cat. 4 (H302) Eye Irrit. Cat. 1 (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. If breathing is laboured oxygen should be supplied by qualified personnel only. Seek medical assistance immediately.
Skin contact:	Remove contaminated clothing and footwear. Wash skin gently but thoroughly with plenty of water and non-abrasive soap for 15 to 20 minutes. Seek medical assistance if irritation persists.
Eye contact:	Immediately flush eyes with a stream of gently flowing water for 15 minutes, holding eyelids open. Remove contact lenses, if present, after the first 5 minutes. Seek medical assistance if irritation occurs.
Ingestion	Never give anything by mouth to an unconscious person. Do not induce vomiting, unless instructed to do so by a physician. If vomiting occurs, keep head lower than hips to prevent aspiration. Rinse mouth thoroughly with water if person is conscious and alert. Plenty of water may be given to drink if able to swallow. For advice, contact the National Poisons Centre. **Seek medical assistance immediately**.
Most important symptoms and effects, both acute and delayed:	None known.
Indication of any immediate medical attention and special treatment needed:	No specific antidote known. Treat symptomatically and supportively.

5) FIRE-FIGHTING MEASURES:

Extinguishing Media:	Fine water spray, foam, carbon dioxide, dry chemical powder.
Unsuitable Extinguishing Media:	Do not use high volume water jet, due to contamination risk.
Specific Hazards arising from the substance/mixture:	Dust/air mixture may be explosive in the presence of an ignition source. Fire may produce irritating and/or toxic vapors, mists or other products of combustion.
Fire Fighting:	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. 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.

Protective clothing:	Contain firefighting water for later disposal. Avoid the accumulation of polluted run-off from site. Full protective clothing and self-contained breathing apparatus.
6) ACCIDENTAL RELEASE MEASURES:	
Personal precautions, protective equipment and emergency procedures:	Do not breathe in spray or fumes. Avoid contact with skin and eyes. For personal protection see Section 8.
Environmental precautions:	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. Considered a marine pollutant.
Methods and material for containment and cleaning up:	Wear protective clothing and avoid breathing mist/vapour. Clear area of unprotected personnel. Ventilate area. Contain and absorb liquid spills with inert material, remove by scoop or vacuum. Use approved industrial vacuum cleaner for removal and place in waste containers. Wash area with water and detergent and absorb with further inert material. Heavily contaminated soil layers have to be dug out down to clean soil. If spill does enter waterways contact the local authority. Spilled product cannot be re-used and must be disposed of by incineration or disposal in a chemical waste disposal facility. If containers cannot be recycled, they should be disposed of together with the waste chemical.
7) HANDLING & STORAGE:	
Precautions for Safe Handling:	Harmful if swallowed. Avoid skin and eye contact and inhalation of spray mist. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke. Wash contaminated clothing before re-use. Do not apply directly to areas where surface water is present. Water used to clean equipment must be disposed of correctly to avoid contamination. APPROVED HANDLER: This product must be under the control of an approved handler when applied in a wide dispersive manner; or used by a commercial contractor.
Conditions for Safe Storage, including any incompatibilities:	Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs, fertilisers and seeds. Keep away from animals, children or uninformed persons. Store away from heat or open flames.
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.
Control Parameters: Occupational exposure limits:	NA
<u>PERSONAL PROTECTIVE EQUIPMENT:</u> **Clothing:**	Consult supplier to confirm that the equipment is suitable. Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with this substance. Wear long-sleeved shirt and long pants, chemical-resistant footwear. Wash contaminated clothing and clean protective equipment before re-use.
Respiratory protection:	

Gloves: **Eye protection:** **Emergency eye wash:**	Wear an approved respirator suitable for protection from mists of pesticides if ventilation is inadequate. Employee must wear appropriate chemical-resistant gloves to prevent contact with this substance The use of safety goggles with side shields is recommended. 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:	Liquid
Colour:	Cream
Odour:	Characteristic odour
Solubility:	Suspends and emulsifies in water
pH:	6-8.5
Odour threshold:	Not available
Melting point / Freezing point	Not available
Initial boiling point and boiling range	Not available
Flash point:	Not flammable
Evaporation rate:	Not available
Flammability (solid, gas)	Not flammable
Upper/ lower flammability or explosive limits:	Not explosive
Vapour pressure:	Not available
Vapour density:	Not available
Relative density:	1.122 g/L
Partition coefficient: n-octanol/water	Not available
Auto-ignition 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):**	Stable under normal conditions. When stored appropriately this product should show no significant degradation for 2 years from the date of manufacture. None known. Protect from sunlight, open flames and sources of heat. Avoid contact with strong oxidizing agents and strong acids. Dust/air mixture may be explosive in the presence of an ignition source. Fire may produce irritating and/or toxic vapors, mists or other products of combustion.
11) TOXICOLOGICAL INFORMATION:	
Acute Toxicity: **Oral:** **Dermal:** **Inhalation:**	 LD_{50} >2000 mg/kg, cut-off value 2500 mg/kg LD_{50} >2000 mg/kg LC_{50} <4.53 mg/L

Skin Corrosion/Irritation:	Not an irritant
Serious Eye Damage/Irritation:	Not an irritant
Respiratory or Skin Sensitization:	Not a sensitizer
Germ Cell Mutagenicity:	Azoxystrobin: Technical material is not mutagenic. Flusilazole: Studies to assess gene mutation, chromosomal aberration, or unscheduled DNA synthesis were clearly negative.
Carcinogenicity:	Azoxystrobin: Technical material is not carcinogenic. Flusilazole: There was no NOAEL for systemic toxicity; the NOAEL for oncogenicity was 14.8 mg/kg b.w per day when groups of 65 male and 65 female Crl:CD(SD)BR rats received diets containing technical-grade Flusilazole (purity, 95%) at doses of 0,125, 375, or 750 ppm, equal to 0, 5.03, 14.8, and 30.8 mg/kg b.w per day for males and 0, 6.83, 20.5, and 45.6 mg/kg b.w per day for females, for two years
Reproductive Toxicity:	May damage fertility or the unborn child.
STOT-SE:	No data available.
STOT-RE:	No data available.
Aspiration Hazard:	No data available.
12) ECOLOGICAL INFORMATION:	
Azoxystrobin: Persistence: Azoxystrobin and its degradates have low to moderate mobility in soil and low potential for bioaccumulation; typical K_{oc} *c*. 500.	
Ecotoxicity: Azoxystrobin **Birds:** **Fish:** **Daphnia:** **Algae:** **Worms:** **Bees:** **Ecotoxicity: Flusilazole** **Birds:** **Fish:** **Daphnia:** **Bees:**	Acute oral LD_{50} for mallard ducks and bobwhite quail >2000 mg/kg. LC_{50} (5 d) for bobwhite quail and mallard ducks >5200 mg/kg diet. LC_{50} (96 h) for rainbow trout 0.47, bluegill sunfish 1.1, carp 1.6, sheepshead minnows 0.66 mg/l. For degradate R234886, LC_{50} >150 mg/l. EC_{50} (48 h) 80 µg/l. EC_{50} for degradates: R234886 >180, R401553 >50, R402173 >50 mg/l. EC_{50} (120 h) for *Selenastrum capricornutum* 0.12 mg/l. LC_{50} (14 d) for earthworms 283 mg/kg. (oral) >25 µg/bee; (contact) >200 µg/bee. Acute oral LD50 for mallard ducks > 1590 mg/kg LC50 (96h) Rainbow trout 1.2 mg/L, Bluegill sunfish 1.7 mg/L. LC50 (48h) 3.4 mg/L. LD50 > 150 µg/bee
Persistence and Degradability:	Azoxystrobin: Rapidly degraded in soil. Flusilazole: Average DT50 95 days.
Bio-accumulative Potential:	Azoxystrobin: low potential for bioaccumulation.
Mobility in Soil:	Azoxystrobin: low to moderate mobility in soil; typical K_{oc} *c*. 500.
13) DISPOSAL CONSIDERATIONS:	
Waste Disposal:	In accordance with local and national regulations.

	Open dumping or burning of this pesticide is prohibited. Do not re-use or reprocess waste. 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:	Refer to the product label for instructions. If the container is to be refilled, do not rinse with any material or introduce any pesticide other than this product. DO NO REUSE THE CONTAINER FOR ANY OTHER PURPOSE. Do not transport if this container is damaged or leaking.
14) TRANSPORTATION INFORMATION:	
Road Transport ADR / IRD:	UN NUMBER: 3082 UN Proper Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Azoxystrobin, Flusilazole) 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, Flusilazole) 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: 3082 UN Proper Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Azoxystrobin, Flusilazole) 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:	
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.

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. 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.

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Abbreviations and acronyms:

1. CAS number: Chemical Abstracts Service number.
2. CLP: Classification, Labelling, Packaging.
3. LD_{50}: Lethal Dose for 50% of the test population.
4. LC_{50}: Lethal Concentration for 50% of the test population.
5. DT_{50}: Half-life.
6. GHS: Globally Harmonised System (of Classification and Labelling of Chemicals).

Literature References:

- GHS: www.ccohs.ca/oshanswers/chemicals/ghs.html
- ECHA: https://echa.europa.eu/search-chemicals