FARM-AG INTERNATIONAL (Pty) Ltd

P.O. Box 1523, Durban 4000

Head Office : 61 Marshall Dr., Old Mill Industrial Park, Mount Edgecombe **South Africa**
Registration Number: 2005/011761/07
Tel + 27 31 003 3486 ● **Fax** + 27 31 502 5825

SECTION 1 - PRODUCT & COMPANY IDENTIFICATION

Product Name: **DIMENSION 325 SC**
Product Use: Fungicide
Effective Date: October 2016
Revision Date: March 2021
In case of Poisoning:
Griffon Poison Information Centre : 082 446 8946
Western Cape Poison telephone service: 0861 555 777

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

Common Name: 1) Azoxystrobin
2) Difenoconazole
Chemical Name: 1) Methyl (E)-2-{2-cyanophenoxy)pyramid-4-yloxy] phenyl}-3-methoxycrylate (**IUPAC**)
2) 1-[2-[2-chloro-4-(4-chlorophenoxy)phenyl]-4methyl-1.3-methyl-1.3-dioxolan-2ylmethyl]-H-1,2,4-triazole (**IUPAC**)
CAS No.: 135410-20-7; 160430-64-8
Chemical family: 1) Stobilurin: methoxyacrylate
2) Triazole fungicide
Molecular formula: 1) $C_{22}H_{17}N_3O_5$
2) $C_{19}H_{17}Cl_2N_3O_3$
Use: Fungicide for control of certain fungal diseases in barley, wheat and soybeans.
Formulation: **(Azoxystrobin 200 g/l + Difenoconazole 125 g/l) 325 g/ℓ Suspension Concentrate**

Hazardous ingredients of toxicological concern:

Inert:	concern:	% present:
Azoxystrobin	**harmful**	**± 20%**
Difenoconazole	**harmful**	**±13%**
Inerts	**harmful**	**±12%**

Symbol: **N, X_n, X_i**
Indication of Danger: Environmental hazardous, Harmful & Irritant
RISK-PHRASE(S) R20/22, R36/38, R 51/52

SECTION 3 - HAZARD IDENTIFICATION

Ingestion:
Harmful if swallowed.
Skin Contact:
May cause mild skin irritation
Eye Contact:
May cause mild skin irritation
Other Effects:
Both Azoxystrobin and Difenoconazole active ingredients are considered environmentally hazardous.

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SECTION 4 - FIRST AID MEASURES AND PRECAUTIONS

Inhalation:
Immediately remove source of contamination or move victim to fresh air. If breathing has stopped, perform artificial respiration and administer oxygen. Do not give mouth-to-mouth resuscitation if victim ingested or inhaled the substance. Keep person warm and at rest. Treat symptomatically and supportively as and when required. Call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. Notes to physicians: There is no specific antidote. All treatment should be based on observed signs and symptoms of distress in the patient.

Skin contact:
Remove contaminated clothing, shoes and leather goods immediately. Gently wipe off excess chemical. Wash skin gently and thoroughly with non-abrasive soap or mild detergent and large amounts of water until no evidence of chemical remains (approximately 15 to 20 minutes). Seek medical advice if irritation develops and persists.

Eye contact:
Immediately flush the eyes with gently flowing lukewarm water or sodium bicarbonate solution for 20 to 30 minutes, occasionally lifting the upper and lower lids. If irritation persists, seek medical advice immediately.

Ingestion:
Do not induce vomiting. Never induce vomiting or give anything to drink to an unconscious person. If the person is alert, rinse mouth thoroughly with water and give one or two glasses of water to drink. Treat symptomatically and supportively. Call a physician or Poison Control Center.

Advice on treatment:
No specific antidote available. Treat symptomatically and supportively.

SECTION 5 - FIRE-FIGHTING MEASURES

Flash point: NOT FLAMMABLE

Extinguishing agents:
Extinguish fires with carbon dioxide, dry powder, or alcohol-resistant foam. Water spray as a fog can be used for cooling of unaffected stock, but avoid water coming in contact with the product. Contain water used for fire-fighting for later disposal.
Avoid the accumulation of polluted run-off from the site.

Fire fighting:
Remove spectators from surrounding area. Remove container from fire area if possible without risk. Eliminate all ignition sources in immediate area. Fight fire from maximum distance. For massive fire, use unmanned hose holder or monitor nozzles. Contain fire control agents for later disposal. Use a recommended extinguishing agent for the type of surrounding fire. Avoid inhaling hazardous vapours. Keep upwind.
This product will emit toxic fumes when burned, including fumes of SO_4. May produce irritating or poisonous mists or other products of combustion.

Personal protective equipment:
Fire-fighters and others that may be exposed should wear full protective impervious clothing, including gloves and eye protection, and self-contained breathing apparatus. Contact with the fumes and vapours should be avoided by staying upwind.
Clean all clothing before re-use. Severely contaminated clothing cannot be adequately decontaminated, and must be disposed as a hazardous waste. Shower with soap and water after contact with this product.

SECTION 6 - ACCIDENTAL RELEASE MEASURES (SPILLAGE)

Personal precautions:
Avoid contact with skin and eyes. Do not inhale spray or fumes. For personal protection see Section 8.

Environmental precautions:
Do not allow entering drains or watercourses. Spillage or uncontrolled discharges into water courses (or public waters) to be reported immediately to the Police and to the Department of Water/Environmental Affairs.

Occupational spill:

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For small liquid spills, soak up with lime, damp earth or sand, or other non-combustible absorbent material and place into containers for later disposal. For large liquid spills, contain the liquid for later disposal. In situations where product comes in contact with water, contain contaminated water for later disposal. Do not flush spilled material into drains. Keep spectators away.

SECTION 7 - HANDLING AND STORAGE REQUIREMENTS

Handling:
Harmful if swallowed. Mild irritant to eyes and skin. Avoid contact with eyes and skin, and inhalation of dust, spray and vapour. Use with adequate ventilation. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Remove clothing immediately if the product gets inside. Then wash skin thoroughly using a non-abrasive soap and put on clean clothing.
Do not apply directly to areas where surface water is present, or to intertidal areas below the mean high water mark. Water used to clean equipment must be disposed of correctly to avoid contamination.
Storage:
Keep out of reach of unauthorized persons, children and animals. Store in its original labelled container in shaded, well-ventilated area. Store in dry area. Not to be stored next to foodstuffs and water supplies. Local regulations should be complied with.

SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION

Comply with occupational safety, environmental, fire, and other applicable regulations.
PERSONAL PROTECTIVE EQUIPMENT:
Respirator:
Where exposure through inhalation may occur when handling and/or when preparing the spray mixture, wear a face mask. If the product is used in dusty or confined conditions or spillage and fire conditions a respirator suitable for protection from dusts and mists of pesticides is adequate.
Clothing:
Employee must wear appropriate protective (impervious) clothing, boots, hat and equipment to prevent repeated or prolonged skin contact with this substance. Do not wear leather clothing.
Gloves:
Employee must wear appropriate chemical resistant protective gloves to prevent contact with this substance.
Eye protection:
The use of safety goggles (full-face shield) 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.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Light yellow to yellow suspension
Odour: Sweetish
pH: 5.0-9.0
Vapour Pressure: Not available
Vapour Density: Not available
Surface tension: 29.4 mN/m at 20°C
Boiling Point/Range: ca. 100°C at 1013 hpa
Freezing/Melting Point: Not available
Solubility: Miscible
Density: 1.06 g/cm^3 at 20°C
Viscosity, dynamic: 203-855 mPa.s at 20°C; 124-657 mPa.s at 40°C
Flash Point: >100°C (closed up)
Upper and Lower Flammable Limits in Air: Non flammable
Auto Ignition Temperature: 455±5°C
Explosive Properties: Not explosive
Oxidising Properties: Not oxidizing
Combustibility: Combustible

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Corrosiveness: Not corrosive to HDPE

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute Effects:
Eyes:
Formulation may cause mild irritation
Skin:
Formulation may cause mild irritation
Dermal sensitization:
Not expected to be a skin sensitizer. Individuals may develop an allergic response.
Ingestion:
Harmful if swallowed.
Oral LD_{50} rats:
LD_{50}: 7634 mg/kg (calc.)
Dermal LD50 rats:
LD_{50}: >5992 mg/kg (calc.)
Inhalation LC_{50} (4 hours):
Azoxystrobin: LC_{50}: 0.69 – 0.96 mg/l (4 h, nose only)
Difenoconazole: LC_{50}: >3285 mg/l (4 h)
Other:
Azoxystrobin technical has been extensively tested on laboratory mammals and in test-tube systems. No evidence was obtained of mutagenic, carcinogenic, teratogenic neurotoxic or reproductive effects.
Difenoconazole technical has been extensively tested on laboratory mammals and in test-tube systems. No evidence was obtained of mutagenic, carcinogenic or neurotoxic effects..
Azoxystrobin ADI: 0.2 mg/kg b.w.
Difenoconazole: ADI: 0.01 mg/kg b.w [2007]

SECTION 12 - ECOLOGICAL INFORMATION

Mobility, Degradability & Accumulation:
Azoxystrobin tech: Animals, **in rats** , the majority of radiolabeled is excreted in the faeces with little remaining radioactivity in any tissue of the animal. A large number of metabolites were formed of which only the glucuronide of **azoxystrobin** acid is present at > 10% of the administered dose. In goats and hens, **azoxystrobin** is also excreted rapidly, with low residue in milk., meat or eggs. Plants, **in wheat**, **grapes and peanuts** metaboliisim was extensively, but parent **azoxystrobin** was the only major (>10%) residue. Metabolism followed similar pathways in all three crops. Soil/Enironment, **in soil**, DT_{50} (lab.) 70 d (geometric mean, normalised 20 ^{o}C pF2, SFO kinetics). **In soil**, the dark, up to six identified metabolites were formed, over 120 d, up to 27% of applied radiolabel is involved as CO_2. Dissipation in the field is faster, DT_{50} (Geometric mean: DT_{90} 94 d (best fit , HS kinetics: DT_{50} 13 d, DT_{90} 236 d). On soil, photolysis DT_{50} 11 d. **Azoxystrobin** is classified as moderately mobile in soil, average K_{foc} for **azoxystrobin** c. 430. Field dissipation studies showed rgat neither **azoxystrobin** nor its major degredates were typically found in the soil below the top 15 cm. In water-sediment systems (lab. 20 ^{o}C, dark), water phase ave. DT_{50} 6.1 d (SFO). Degradation in atmosphere occurs by reaction with hydroxyl radicals (AOP mdel), DT_{50} 2.7 h.

Difenoconazole tech: **Animals**, After oral administration, **difenoconazole** was rapidly eliminated practically to entirely, with urine and feaces. Residues in tissues were not significant and there was no evidence of accumulation. **Plants,** two major routes of metabolism: one by a triazole route to triazolylalanine and triazolylacetic acid; the other by hydroxylation of the phenyl ring, followed by conjugation. **Soil/Environment**, Practically immobile in soil, strong adsorption to soil particles (mean adsorption coefficient normalised to organic carbo, K_{oc}, ads 4545 ml/g) low potential to leach below top soil layer. Soil dissipation rate is slow and dependent on application rate: DT_{50} C. 3 mo -1y. Hydrolytically stable at pH 5 - 9 (25^{o}C). Undergoes indirect photosynthesis ibn (sterile) natural water; DT_{50} 4.6 d. In standard lab. Water-sediment system (n=2) in dark, rapidly dissipation from the water, DT_{50} 1 – 3, but slow degradation in whole system, DT_{50} c. 8 mo.

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ECOTOXICOLOGY:

Birds: Low acute risk to birds.
***Azoxystrobin tech*:** Oral LD_{50}: Bobwhite quail & Mallard ducks> 2000 mg/kg.
Dietary LC_{50}: Bobwhite quail & Mallard ducks> 5200 mg/kg
***Difenoconazole tech*:** Oral LD_{50}: (9 – 11 d) mallard duck >2150, Japanese quail >2000 mg/kg b.w.
Dietary LC_{50}: Bobwhite quail 4760, mallard duck >5000 ppm

Fish: Very toxic to fish & *Daphnia*
Azoxystrobin: LC_{50} (96 h) for rainbow trout 0.47, bluegill sunfish 1.1, carp 1.6, sheepead minnows 0.66 mg/l and ***Daphnia***: EC_{50} (48 h) 0.28 mg/l
Difenoconazole: LC_{50} (96 h) for rainbow trout 1.1, bluegill sunfish 1.2, carp 1.6, sheepead minnows 1.1 mg/l and ***Daphnia***: EC_{50} (48 h) 0.77 mg/l.

Bees:
Azoxytrobin: LD_{50} honeybees (oral) >25 µg/bee; contact >200 µg/bee
Difenoconazole: none toxic to honeybees LD_{50}: (oral) >187 µg/bee; contact >100 µg/bee

Algae:
***Azoxystrobin tech*:** EC_{50}: *Pseudokirchneriella subcapitata* 0.18 mg/l. EC_{50} (72h) for diatom *Navicula pelliculose 0.028 mg/l*
Difenoconazole: EC_{50}**:** (96h) for *Scenedesmus subspicatus 0.03 mg/l.*

Earthworms: Medium toxicity to worms
Azoxystrobin: LC_{50} (14 d) for earthworms 283 mg/kg.
Difenoconazole: LC_{50} (14 d) for earthworms >610 mg/kg dry soil.

SECTION 13 - DISPOSAL CONSIDERATION

Pesticide and container disposal:
Open dumping or burning of this pesticide is prohibited. Never pour untreated waste or surplus products into public sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers.
Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is destroyed.
TRIPLE RINSE empty containers in the following manner:
Invert the empty container over the spay or mixing tank and allow draining for at least 30 seconds after the flow has slowed down to a drip. Thereafter rinse the container three times with a volume of water equal to a third of the volume of the container. Add the rinsing to the contents of the spray tank before destroying the container in the prescribed manner.
Do not re-use the empty container for any other purposes but destroy it by perforation, flattening and bury in an approved dumpsite. Prevent contamination of food, feedstuffs, drinking water and eating utensils. Comply with local legislation applying to waste disposal.

SECTION 14 - TRANSPORT INFORMATION

UN NUMBER:	**3082**
ADR/IRD:	
Class:	9
Packaging group:	III
Shipping name:	Environmentally Hazardous Substance, Liquid, N.O.S **(Azoxystrobin 200 g/l + Difenoconazole 125 g/l) 325 g/l Suspension Concentrate**
IMDG/IMO:	
Class:	9
Packaging group:	III
Shipping name:	Environmentally Hazardous Substance, Liquid, N.O.S

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(Azoxystrobin 200 g/l + Difenoconazole 125 g/l) 325 g/l Suspension Concentrate

ICAO/IATA:

Class: 9
Packaging group: III
Shipping name: Environmentally Hazardous Substance, Liquid, N.O.S
(Azoxystrobin 200 g/l + Difenoconazole 125 g/l) 325 g/l Suspension Concentrate

Considered a marine pollutant

SECTION 15 - REGULATORY INFORMATION

Symbol: **N, X_n, X_i**
Indication of danger: Environmental hazardous, Irritant and Harmful substance
Risk phrase(s):
R 20/22 Harmful by inhalation and if swallowed.
R 36/38 Irritating to eyes and skin.
R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in aquatic environment

Safety phrases:
S 1/2 Keep out of reach children.
S 13 Keep away from food, drink and animal feeding stuffs.
S 22 Do not breathe dust.
S 24/25 Avoid contact with skin and eyes.
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

SECTION 16 - OTHER INFORMATION

Packaging:
Packed in 1, 5, 10, 20 and 25 litres plastic containers and labelled according to South African regulations and guidelines.

Disclaimer:
The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage use of the product. It is not applicable to unusual or non-standard uses of the product or where instructions or recommendations are not followed.
All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.

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