

PRECAUTIONS

1. Handle with care. Avoid splashing/contact. Poisonous by swallowing, inhalation and contact with the skin.
2. Wear suitable protective clothing, i.e. for mixing: gloves and overalls; for application overalls, hat and solid footwear.
3. **DO NOT** eat, drink or smoke while handling this product.
4. On completion of mixing/spraying, remove protective clothing and wash entire body and change clothing. Thoroughly clean protective clothing/equipment.
5. DANGEROUS TO FISH and other aquatic organisms.
6. KEEP OUT OF REACH OF CHILDREN.
7. KEEP APART FROM FOOD, FOODSTUFFS, seeds and fertilizers.
8. Store in original container in a cool, dry place and KEEP UNDER LOCK AND KEY.
9. Use only on the crops for which the product is registered.
10. Avoid drift onto adjacent crops or soil.
11. After use, wash sprayer thoroughly and dispose of washings in a safe place e.g. on waste ground. **DO NOT** contaminate water supplies.
12. Triple rinse and then puncture empty container and place in a secure disposal site. **DO NOT** use for any other purpose.

SYMPTOMS OF POISONING

There are no specific symptoms of poisoning known for this compound.

FIRST AID MEASURES

If inhaled:

Move to fresh air.

Skin contact:

Remove contaminated clothing immediately, wash affected skin with soap and water. Go to a doctor if skin is affected.

Eye contact:

Rinse eyes with clean water for 15 minutes. Go to a doctor.

If swallowed:

DO NOT induce vomiting. Seek medical advice immediately.

Note: Never give anything by mouth to an unconscious patient.

NOTE TO PHYSICIAN:

If the amount of chemical ingested is judged to be less than a lethal dose, observe the patient and treat symptomatically. If gastric lavage is considered necessary, prevent aspiration of gastric contents. Consider administration of activated charcoal and a laxative. No specific antidote is known. Apply symptomatic therapy.

Shelf life: Two years from date of manufacture if kept in the original unopened container under constant cool and dry conditions.

SAFETY PRECAUTIONS

Empty container disposal: invert the empty container over the spray tank or mixing tank and allow to drain 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 minimum of 10% of the container. Add the rinsings to the contents of the spray tank. Destroy the empty container by perforation and flattening. Return to supplier for recycling. **DO NOT** use for any other purpose. Dispose of the wash water at a site for the disposal of pesticides.

Decontamination of sprayer: Clean applicator thoroughly after use and ensure that all traces of AZOXY DUO 32.5 SC are removed. Make use of the following method;

- (a) Drain and rinse tank, spray boom and hoses with clean water for at least 10 minutes
- (b) Fill tank with clean water and add it to 1 litre household bleach (5%) or 1.5 Litres of household bleach (3.5%) per 200 Litres of water. Rinse hoses and spray boom and leave in tank for 15 minutes whilst agitating. Drain through nozzle outlets.
- (c) Repeat step (b) and thereafter, rinse thoroughly with clean water and dispose of the wash water at a site designated for the disposal of pesticides.

Date of Manufacture: SEP. 2018 Batch Number: 20180914

Manufactured by:

NOVAAGRO (HK) LTD
6TH FLOOR, WYNDHAM PLACE,
44 WYNDHAM STREET,
CENTRAL HONG KONG



1. Triple rinse clean container after use
2. Punctures holes in bottom
3. Return to Maguire's Recycling Facilitator / Return to nearest recycling facility

AZOXY DUO 325SC

Fungicide

Reg. No.:

1 Litre



HARMFUL IF SWALLOWED

Composition

mass/vol.

Azoxystrobin.....200g/L
Difenoconazole.....125g/L
Inert ingredients.....to 1 litre

Chemical group:

Azoxystrobin.....Strobilurin
Difenoconazole.....Triazole

FUNGICIDE FOR AGRICULTURAL USE

A broad spectrum fungicide to control mainly foliar fungal diseases such as Alternaria leaf spot and Frogeye in Tobacco, Early blight in Potatoes and Tomatoes and Frogeye in Soyabeans.

KEEP OUT OF REACH OF CHILDREN

RESISTANCE MANAGEMENT

AZOXY DUO 32.5 SC is recommended in a spray sequence or alternation with fungicides with different modes of actions. Apply blocks of 2-3 sprays of **AZOXY DUO 32.5 SC** in alternation with blocks of 2-3 sprays of the other products. **DO NOT** alternate with strobilurins or triazoles.

COMPATIBILITY

AZOXY DUO 32.5 SC is compatible with most fungicides, insecticides and acaricides with the exception of products containing heavy metals. However, since compatibility can be adversely affected by the quality of the water used in the mixture, the manufacturer recommends that a trial mixture be done using the water intended for spraying.

MIXING

Half fill the sprayer tank with clean water. Add the recommended quantity of **AZOXY DUO 32.5 SC** to the water while agitating. Top up tank with the required volume of water. Always stir the spray mixture well and apply within a few hours. **DO NOT** prepare more spray mixture than is needed for the immediate operation.

APPLICATION

In all cases, apply as a full cover spray (200-600 Litres/ha in potatoes; 200-1000 Litres/ha in tomatoes, 120-140 Litre/ha in soyabeans) on a preventative basis. Avoid run-off. Make sure the equipment is properly calibrated to give even distribution throughout the target area. **DO NOT** spray during the hot hours of the day, if the foliage is wet or if rain is expected within 2 hours.

CROP	DISEASE	DOSAGE	APPLICATION DETAILS	PHI (days)
POTATOES	Early blight (<i>Alternaria solani</i>)	500 ml/ha	Start applications preventatively before disease symptoms appear. Apply in blocks of 2 consecutive sprays 7-10 days apart when weather conditions favour the disease. Not more than 6 sprays should be applied per crop cycle.	14
TOMATOES	Early blight (<i>Alternaria solani</i>)	500 ml/ha	Start applications preventatively before disease symptoms appear. Apply in blocks of 2 consecutive sprays 7-10 days apart when weather conditions favour the disease. Not more than 6 sprays should be applied per crop cycle.	14
SOYABEANS	Frogeye (<i>Cercospora sojina</i>)	500 ml/ha	First spray must be at the onset of the disease.	14
ONIONS	Downy mildew	200-400 ml/ha	First spray must be at the onset of the disease	21
WHEAT	Black spot	500 ml/ha	First spray must be at the onset of the disease	14
PEACHES NECTARINES PLUMS	Rust	500 ml/ha	First spray must be at the onset of the disease	21
GARLIC	Rust	200-300 ml/ha	First spray must be at the onset of the disease	21
CHICK PEAS	<i>Aschochyta spp.</i>	150-300 ml/ha	First spray must be at the onset of the disease	75
ORNAMENTALS	Powdery mildew	500-750 ml/ha	First spray must be at the onset of the disease	7
TOBACCO LANDS	Alternaria (<i>Alternaria alternata</i>) and Frogeye (<i>Cercospora nicotianae</i>)	GROUND APPLICATION 500 ml/ha applied in 200 L/ha	Start spraying at 8 weeks after planting continuing at 14-day intervals up to 14 weeks after planting, applying a maximum of 4 sprays in any given season. Spray method: High volume-200 L water/ha	

Registration held by:

MAGCHEM (PVT) LIMITED,
2274 TILBURY ROAD,
WORKINGTON, HARARE,
ZIMBABWE



MATERIAL SAFETY DATA SHEET

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REVISION NO : 0

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SUPPLIER : NOVA AGRO (HK) LTD.

(Reg. No. 1023146)
6th Floor Wyndham Place
44 Wyndham Street
CENTRAL HONG KONG.
TEL No.: +852 3586 2521

EMERGENCY TELEPHONE NUMBERS

SPILLAGES

Cell phone No. : +27-83-676 1998

POISONINGS:

National Poison Centre : +27-21-9386084 (office hours).
(South Africa) : +27-21-9316129 (after hours).
: +27-800 33444 (24 h)

1. IDENTIFICATION OF THE SUBSTANCE

Trade Name: AZOXY DUO 325SC
Active ingredients: Azoxystrobin
Difenoconazole
Chemical Name: methyl (E)-2-{2-[6-(2-cyano-
phenoxy) pyrimidin-4-yloxy]
phenyl}-3-methoxyacrylate
(IUPAC) +
cis-trans-3-chloro-4-[4-methyl-2-
(1*H*-1,2,4-triazol-1-ylmethyl)-1,3-
dioxolan-2-yl]phenyl 4-
chlorophenyl ether (IUPAC)
CAS No.'s 131860-33-8
119446-68-3
Chemical Family: stribularin
azole
Chemical Formula: C₂₂H₁₇N₃O₅
C₁₉H₁₇Cl₂N₃O₃
Use: Systemic fungicide

2. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components: Azoxystrobin 200g/L
Difenoconazole 125g/L
EEC classification: Xi Xn
Risk Phrases: R22 – R23 – RR36/38 – R50/53

3. HAZARDS IDENTIFICATION

Classification of the mixture

Acute toxicity, Category 4 H302: Harmful if swallowed.
Category 4 H332: Harmful if inhaled.

Skin sensitisation, Sub-category 1B H317: May cause an allergic skin reaction.

Acute aquatic toxicity, Category 1 H400: Very toxic to aquatic life.

Chronic aquatic toxicity, Category 1 H410: Very toxic to aquatic life with long lasting effects.

4. FIRST AID MEASURES

General advice: Have the product container, label or Material Safety Data Sheet with you when calling the emergency number, a poison control center or physician, or going for treatment.

Inhalation: Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration.

Dangerous for the environment

Inhalation: Remove to fresh air.

If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest.

Call a physician or Poison Control Centre immediately.

Skin contact: Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required

Ingestion: If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting.

Medical advice: There is no specific antidote available. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

Extinguishing media - small fires. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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Extinguishing media - large fires. alcohol-resistant foam water spray.

Extinguishing media which must not be used for safety reasons: Do not use a solid water stream as it may scatter and spread fire.

Specific hazards during fire fighting: As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10). Exposure to decomposition products may be a hazard to health.

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus.

Further information: Do not allow run-off from fire fighting to enter drains or water courses.

Cool closed containers exposed to fire with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Refer to protective measures listed in sections 7 and 8.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

Methods for cleaning up: Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Additional advice: If the product contaminates rivers and lakes or drains inform respective authorities.

7. HANDLING AND STORAGE

HANDLING

Advice on safe handling: No special technical protective measures required.

No special handling advice required.

Avoid contact with skin and eyes.

When using, do not eat, drink or smoke.

For personal protection see section 8.

STORAGE

Requirements for storage areas and containers: No special storage conditions required. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feed.

Other data: Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

Components	Exposure limit(s)	Value	type	Source
azoxystrobin	2 mg/m ³	8 h	TWA	

propane-1,2-diol	10 mg/m ³	470 mg/m ³		
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Particulates Total (vapour & particulates)	8 h	TWA		
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UK HSE

ENGINEERING MEASURES

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated.

The extent of these protection measures depends on the actual risks in use.

If airborne mists or vapors are generated, use local exhaust ventilation controls.

Assess exposure and use any additional measures to keep airborne levels below any relevant exposure limit.

Where necessary, seek additional occupational hygiene advice.

PERSONAL PROTECTIVE EQUIPMENT

Protective measures: The use of technical measures should always have priority over the use of personal protective equipment.

When selecting personal protective equipment, seek appropriate professional advice.

Personal protective equipment should be certified to appropriate standards.

Respiratory protection: No personal respiratory protective equipment normally required.

A particulate filter respirator may be necessary until effective technical measures are installed.

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Hand protection: Chemical resistant gloves are not usually required.

Select gloves based on the physical job requirements.

Eye protection: Eye protection is not usually required.

Follow any site specific eye protection policies.

Eye/face protection should be certified to EN 166.

Skin and body protection: No special protective equipment required. Select skin and body protection based on the physical job requirements.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form: liquid

Colour: light yellow to yellow orange

Flash point: > 100°C (1007 hPa)

Oxidizing properties: not oxidizing

Density: 1.11 g/cm³ (20°C)

Water solubility: Forms suspension in water

Viscosity, dynamic: 117 - 541 mPa.s at 20°C; 76.0 - 427 mPa.s at 40°C

10. STABILITY AND REACTIVITY

Hazardous decomposition products: Combustion or thermal decomposition will evolve toxic and irritant vapors.

Hazardous reactions: None known.

Hazardous polymerization does not occur. Stable under normal conditions.

11. TOXICOLOGICAL INFORMATION

Product:

Acute oral toxicity: LD₅₀ (Mouse, male and female): 1,424 mg/kg

Acute inhalation toxicity: LC₅₀ (Rat, male and female): 2.06 - < 5.17 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity: LD₅₀ (Rat, male and female): > 2,000 mg/kg

Assessment: The substance or mixture has no acute dermal toxicity

Components:

azoxystrobin:

Acute oral toxicity: LD₅₀ (Rat, male and female): > 5,000 mg/kg

Acute inhalation toxicity: LC₅₀ (Rat, female): 0.7 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

LC₅₀ (Rat, male): 0.9 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity: LD₅₀ (Rat, male and female): > 2,000 mg/kg

Assessment: The substance or mixture has no acute dermal toxicity

difenoconazole:

Acute oral toxicity: LD₅₀ (Rat, male and female): 1,453 mg/kg

Assessment: The component/mixture is moderately toxic after single ingestion.

Acute inhalation toxicity: LC₅₀ (Rat, male and female): > 3,300 mg/m³

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity: LD₅₀ (Rabbit, male and female): > 2,010 mg/kg

Assessment: The substance or mixture has no acute dermal toxicity.

12. ECOLOGICAL INFORMATION

12.1 Toxicity Product:

Toxicity to fish: LC₅₀ (*Oncorhynchus mykiss* (rainbow trout)): 1.7mg/l; Exposure time: 96 h

LC₅₀ (*Cyprinus carpio* (carp)): 4.2mg/l; Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates: EC₅₀ (*Daphnia magna* (water flea)): 1.1 mg/l

Exposure time: 48 h

Toxicity to algae: ErC₅₀ (*Pseudokirchneriella subcapitata* (green algae)): 3.9mg/l; Exposure time: 96 h

NOEC (*Pseudokirchneriella subcapitata* (green algae)): 0.23mg/l; End point: Growth rate; Exposure time: 96 h



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Ecotoxicology Assessment

Acute aquatic toxicity: Very toxic to aquatic life.

Classification of the product is based on the summation of the concentrations of classified components.

Chronic aquatic toxicity: Very toxic to aquatic life with long lasting effects. Classification of the product is based on the summation of the concentrations of classified components.

12.2 Persistence and degradability

Components:

azoxystrobin:

Biodegradability: Not readily biodegradable.

Stability in water: Degradation half life: 214 d

Remarks: The substance is stable in water.

difenoconazole:

Biodegradability: Not readily biodegradable.

Stability in water: Degradation half life: 1 d

Remarks: Product is not persistent

12.3 Bioaccumulative potential

Components:

azoxystrobin:

Bioaccumulation: Does not bioaccumulate.

difenoconazole:

Bioaccumulation: High bioaccumulation potential.

Partition coefficient: n-octanol/water: log Pow: 4.4 (25°C)

12.4 Mobility in soil

Components:

azoxystrobin:

Distribution among environmental compartments:

Azoxystrobin has low to very high mobility in soil.

Stability in soil: Percentage dissipation: 50% (DT₅₀: 80 d)

Product is not persistent.

difenoconazole:

Distribution among environmental compartments: Low mobility in soil.

Stability in soil: Percentage dissipation: 50 % (DT₅₀: 149 - 187d)

Product is not persistent.

Where possible, recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging: Empty remaining contents.

Triple rinse containers. Empty containers should be taken for local recycling or waste disposal. Do not re-use empty containers.

14. TRANSPORT INFORMATION

14.1 UN number

ADN: UN 3082

ADR: UN 3082

RID: UN 3082

IMDG: UN 3082

IATA: UN 3082

14.2 UN proper shipping name

ADN: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (AZOXYSTROBIN AND DIFENOCONAZOLE)

ADR: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(AZOXYSTROBIN AND DIFENOCONAZOLE)

RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (AZOXYSTROBIN AND DIFENOCONAZOLE)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (AZOXYSTROBIN AND DIFENOCONAZOLE)

IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (AZOXYSTROBIN AND DIFENOCONAZOLE)

14.3 Transport hazard class(es)

ADN: 9

ADR: 9

RID: 9

IMDG: 9

IATA: 9

13. DISPOSAL CONSIDERATIONS

Product: Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer.



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14.4 Packing group

ADN

Packing group: III

Classification Code: M6

Hazard Identification Number: 90

Labels: 9

ADR

Packing group: III

Classification Code: M6

Hazard Identification Number: 90

Labels: 9

RID

Packing group: III

Classification Code: M6

Hazard Identification Number: 90

Labels: 9

IMDG

Packing group: III

Labels: 9

EmS Code: F-A, S-F

IATA (Cargo)

Packing instruction (cargo aircraft): 964

Packing instruction (LQ): Y964

Packing group: III

Labels: Miscellaneous

IATA (Passenger)

Packing instruction (passenger aircraft): 964

Packing instruction (LQ): Y964

Packing group: III

Labels: Miscellaneous

14.5 Environmental hazards

AND - Environmentally hazardous: yes

ADR - Environmentally hazardous: yes

RID - Environmentally hazardous: yes

IMDG - Marine pollutant: yes

IATA (Passenger) - Marine pollutant: yes

IATA (Cargo) - Marine pollutant: yes

15. REGULATORY INFORMATION

Labeling according to EEC Directive Symbol(s):

N Dangerous for the environment

R-phrases:

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrases:

S2 Keep out of the reach of children.

S13 Keep away from food, drink and animal feedstuffs.

S20/21 When using, do not eat, drink or smoke.

S35 This material and its container must be disposed of in a safe way.

S57 Use appropriate containment to avoid environmental contamination.

Exceptional labeling of special preparations: To avoid risks to man and the environment, comply with the instructions for use.

16. OTHER INFORMATION

Further information

Text of R phrases mentioned in Section 2:

R22 Harmful if swallowed.

R23 Toxic by inhalation.

R36 Irritating to eyes.

R36/38 Irritating to eyes and skin.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of H-Statements

H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H331 Toxic if inhaled.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination



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with any other materials or in any process, unless specified
in the text.
