2809/2021

Amistar Top®

syngenta®

GROUP 11 | 3 FUNGICIDES

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work (UK only).

F

In case of toxic or transport emergency ring +44 (0) 1484 538444 anytime.

Product reg. no: MAPP 18050**; PCS no.** 04582; **UFI:** 1SK0-K4CA-N00K-HS29

A suspension concentrate containing 200 g/l azoxystrobin and 125 g/l difenoconazole and 1,2-benzoisothiazol-3(2H)-one.

A broad-spectrum fungicide for use in outdoor crops of carrots, leeks, Brussels sprouts, cabbage, cauliflower, broccoli/calabrese, kale (winter greens), collards (spring greens), rocket (outdoor) and strawberry (outdoor and protected).

Syngenta UK Limited
CPC4, Capital Park, Fulbourn, Cambridge, CB21 5XE, Tel: Cambridge (01223) 883400

AMISTAR Top® **FOR PROFESSIONAL USE ONLY**

To avoid risks to human health and the environment comply with the instructions for use.

A suspension concentrate containing 200 g/l azoxystrobin and 125 g/l difenoconazole and 1,2-benzoisothiazol-3(2H)-one.

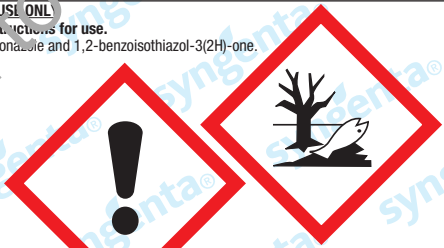
Warning

Harmful if swallowed or inhaled.

May cause an allergic skin reaction.

Very toxic to aquatic life with long lasting effects.

Keep out of reach of children.
Wear protective gloves/protective clothing.
Avoid breathing dust/fume/gas/mist/vapours/spray.
IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTRE or doctor/physician if you feel unwell.
If skin irritation or rash occurs: Get medical advice/attention.
Collect spillage.
Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for triple rinsed empty containers which can be disposed of as non-hazardous waste.



Product reg. no: MAPP 18050**; PCS no.** 04582
UFI: 1SK0-K4CA-N00K-HS29

L1084202 GBRI/12Z PPE 4152176

PROTECT FROM FROST. SHAKE WELL BEFORE USE

5 litres

The product label is compliant with the CPA Voluntary Initiative (VI) guidance (UK only).

The Voluntary Initiative

IMPORTANT INFORMATION - FOR USE ONLY AS A FUNGICIDE

Crop	Maximum individual dose (litres product/hectare)	Maximum number of applications (per crop)	Latest time of application (days before harvest)
Carrot (outdoor)	1.0	2	14
Leek (outdoor)	1.0	1	21
Cabbage (outdoor), Brussels sprouts (outdoor)	1.0	2	21
Outdoor crops of Cauliflower, broccoli/calabrese	1.0	2	14
Rocket (outdoor).	1.0	2	14
Kale (winter greens) and collards (spring greens)	1.0	2	21
Outdoor and Protected strawberry	1.0	2	3

BRAND LOGO/NAME
LOGO/NOM DE MARQUE
LOGO/NOMBRE DEL PRODUCTO

Crops/situations:	Aquatic buffer zone distance (metres):	Comment:
Broccoli/calabrese, Brussels sprout, cabbage, carrot, cauliflower, collard, kale, leek, rocket (outdoor), strawberry (outdoor), strawberry (protected)	5	See Environmental protection (Safety precautions section)

Other specific restrictions:

- For use on broccoli/calabrese, Brussels sprout, cabbage, cauliflower, collards, kale and outdoor rocket, the maximum total dose of difenoconazole must not exceed 250 g per hectare per year.
- For the use on carrots the maximum total dose of difenoconazole must not exceed 375 g per hectare.
- When using in sequence with other azoxystrobin containing products, or on multiple short season crops of broccoli, calabrese, Brussels sprouts, cabbage, cauliflower, collards and kale, the maximum total dose of azoxystrobin must not exceed 500 g azoxystrobin per hectare per year.

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS.

SPECIMEN 2210

TEXT AREA 230mm

SAFETY PRECAUTIONS

(a) Operator protection

Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment.

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS AND SUITABLE PROTECTIVE GLOVES when handling the concentrate or applying by hand-held equipment.

WEAR SUITABLE PROTECTIVE GLOVES when handling contaminated surfaces.

However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.

WHEN USING DO NOT EAT, DRINK OR SMOKE.

WASH SPLASHES from skin or eyes immediately.

WASH HANDS AND EXPOSED SKIN before meals and after work.

IF YOU FEEL UNWELL, seek medical advice immediately (show the label where possible).

(b) Environmental protection

Do not contaminate water with the product or its container.

Do not clean application equipment near surface water.

Avoid contamination via drains from farmyards and roads.

For use in the UK

To protect aquatic organisms respect an unsprayed buffer zone to surface water bodies in line with LERAP requirements.

LERAP

DO NOT ALLOW DIRECT SPRAY from ground crop sprayers to fall within 5 m of the top of the bank of a static or flowing waterbody unless a Local Environmental Risk Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 1 m of the top of a ditch which is dry at the time of application. DO NOT ALLOW DIRECT SPRAY from hand-held sprayers to fall within 1 m of the top of the bank of a static or flowing water body. Aim spray away from water. This product qualifies for inclusion within the Local Environmental Risk Assessment for Pesticides (LERAP) scheme. A LERAP must be carried out in accordance with CRD published guidance before each spraying operation from a ground crop sprayer. The results of the LERAP must be recorded and the records kept available for inspection for three years.

For use in Ireland

To protect aquatic organisms respect an unsprayed buffer zone of 5m to surface water bodies.

(c) Storage and disposal

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDINGSTUFFS.

KEEP OUT OF REACH OF CHILDREN.

KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.

RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times. Add washings to sprayer at time of filling and dispose of safely.

DO NOT RE-USE CONTAINER for any other purpose.

DIRECTIONS FOR USE

IMPORTANT: This information is approved as part of the Product Label. All instructions within this section must be carefully read in order to obtain safe and successful use of this product.

A suspension concentrate containing 200 g/l azoxystrobin and 125 g/l difenoconazole. AMISTAR TOP is a broad-spectrum fungicide for use on outdoor crops of carrots, leeks, Brussels sprouts, cabbage, cauliflower, broccoli/calabrese, kale (winter greens), collards (spring greens), rocket, outdoor and protected strawberry.

RESTRICTIONS

As a precaution AMISTAR TOP should not be applied where there is a risk of spray drift onto neighbouring apple crops.

DISEASES CONTROLLED

Carrots
Alternaria leaf blight (*Alternaria dauci*)
Powdery mildew (*Erysiphe polygoni*)

Leeks
Leaf rust (*Puccinia porri*)
Purple blotch (*Alternaria porri*) – moderate control
Qualified recommendation: May give some control of White tip (*Phytophthora porri*)

Brassicas and rocket (outdoor)
White blister (*Albugo candida*)
Powdery mildew (*Erysiphe cruciferarum*)
When used for control of other diseases AMISTAR TOP applied as a protectant treatment will also control Alternaria (*Alternaria brassicae* and *Alternaria brassicicola*)
and Ring spot (*Mycosphaerella brassicicola*)

Strawberry (protected and outdoor)
Powdery mildew (*Podosphaera aphanis*)
Black spot (*Colletotrichum acutatum*)
Leaf blotch (*Gnomonia comari*)

CROP SPECIFIC INFORMATION

CARROT, LEEK AND BRASSICAS

Timing

Before applying AMISTAR TOP, ensure the crop is free from any stress caused by environmental or agronomic effects. Always inspect crops to assess disease development immediately before spraying. Best results will be achieved from applications made in the earliest stage of disease development or as a protectant treatment following a disease risk assessment or the use of appropriate decision support systems.

Applications must only be made to developed canopy and not before growth stage BBCH 41 as described below:

- Carrot: roots beginning to expand (diameter >0.5cm)
- Leek: leaf bases begin to thicken or extend
- Cabbage: heads begin to form, the 2 youngest leaves do not unfold
- Kale, collard: 10% of the leaf mass typical for the variety reached
- Brussels sprouts: lateral buds begin to develop
- Cauliflower, broccoli, calabrese: heads begin to form, width of growing tip >1cm

A further application can be made if disease pressure remains high. A minimum interval of 14 days must be observed between applications to all brassicae and carrots.

On leeks, only a single application of AMISTAR TOP is permitted. If disease pressure persists a further application of different product may be necessary.

Rate Of Use
1.0 litre per hectare.

Processing
Where a crop is destined for processing, consult your processor before treating with AMISTAR TOP.

ROCKET (OUTDOOR)

Timing
Before applying AMISTAR TOP, ensure the crop is free from any stress caused by environmental or agronomic effects. Always inspect crops to assess disease development immediately before spraying. Best results will be achieved from applications made in the earliest stage of disease development or as a protectant treatment following a disease risk assessment or the use of appropriate decision support systems.

Applications must only be made to developed canopy. Do not apply to these crops until at least 70% crop interception occurs.

A minimum interval of 7 days must be observed between applications.

Rate Of Use
1.0 litre per hectare.

OUTDOOR AND PROTECTED STRAWBERRY

The safety to strawberry crops used for propagation has not been established.

Timing
For optimum results apply AMISTAR TOP as a protectant spray at the beginning of flowering. A further application can be made if disease pressure remains high. Application should be made in sequence with other products as part of a fungicide programme during flowering.

Applications must only be made to developed canopy and not before growth stage BBCH 41: beginning of stolon (runner) formation, stolons visible (about 2cm long)

A minimum interval of 7 days must be observed between applications.

Rate Of Use
1.0 litre per hectare.

Processing
Where a crop is destined for processing, consult your processor before treating with AMISTAR TOP.

RESISTANCE MANAGEMENT
Use AMISTAR TOP as part of an Integrated Crop Management (ICM) strategy incorporating other methods of control, including where appropriate other fungicides with a different mode of action.

To avoid the likelihood of resistance developing, application of AMISTAR TOP should be made with due regard to current FRAG-UK guidelines for QoI compounds. Do not apply more than a total of two applications, when used as part of a programme.

MIXING AND SPRAYING

Mixing
Make sure the sprayer is set to give an even application at the correct volume. Fill the spray tank with half the required volume of clean water and start agitation. Add the required amount of AMISTAR TOP to the spray tank. Agitate the mixture thoroughly before use and continue agitation during spraying. Thoroughly wash all spray equipment with water immediately after use.

Wash out containers thoroughly, preferably using an integrated pressure rinsing device, or manually rinse three times. Add washings to the sprayer at the time of filling. Complete filling to the required volume and continue to agitate throughout the spraying operation.

Spray Volume
Brassicas and Carrots: Apply in a recommended 200-600 litres of water per hectare.
Leeks: Apply in a recommended 300-1000 litres of water per hectare.
Rocket (outdoor) and strawberries (outdoor and protected): Apply in a recommended 300-1200 litres of water per hectare.

Spraying
For outdoor use apply through conventional crop spraying equipment. Apply using a medium quality spray as defined by BCPC. A spray pressure of at least 2 bar is preferred.

Applications for the protected uses should be made via hydraulic nozzle applicator e.g. motorised sprayer with hand lance or boom lance or knapsack applications.

Thoroughly wash all spray equipment with water immediately after use. Do not leave the spray liquid in the sprayer for long periods (such as during meal breaks or overnight).

This product is to be used only in accordance with the recommendations and instructions given on the labels provided with this pack.

Section 6 of the Health and Safety at Work Act
Additional Product Safety Information

(This section does not form part of the product label under the Plant Protection Products Regulations 1995.)

The product label provides information on a specific pesticidal use of the product; do not use otherwise, unless you have assessed any potential hazard involved, the safety measures required and that the particular use has 'Extension of Use' approval or is otherwise permitted under the Plant Protection Products Regulations.

The information on this label is based on the best available information including data from test results.

Safety Data Sheet - V11.0

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY/ UNDERTAKING
1.1 Product Identifier
Product Name: AMISTAR TOP
Design Code: A13703G
Product Registration number: MAPP 18050
Unique Formula Identifier(UFI): 1SK0-K4CA-N00K-HS29

1.2 Relevant Identified Uses of the substance or mixture and uses advised against
Use of the Substance/Mixture: Fungicide
Recommended restrictions on use: professional use

1.3 Details of the supplier of the safety data sheet
Authorisation Holder: Syngenta UK Limited
CPC4, Capital Park
Fulbourn, Cambridge CB21 5XE
United Kingdom
Telephone: +44 (0) 1223 883400
Telefax: +44 (0) 1223 882 99
E-mail address of person responsible for the SDS: customer.services@syngenta.com

1.4 Emergency telephone number
Emergency phone No.: +44 (0) 1484 538444

---

2. HAZARDS IDENTIFICATION
2.1 Classification of the substance or mixture
Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)
Acute toxicity, Category 4 - H302: Harmful if swallowed.
Acute toxicity, Category 4 - H332: Harmful if inhaled.
Skin sensitisation, Sub-category 1B - H317: May cause an allergic skin reaction.
Short-term (acute) aquatic hazard, Category 1 - H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 1 - H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements
Labelling (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Hazard pictograms		
Signal Word	Warning	
Hazard Statements	H302 + H332 H317 H410	Harmful if swallowed or if inhaled May cause an allergic skin reaction. Very toxic to aquatic life with long lasting effects.
Precautionary Statements	P102 P261 P264 P280 P304 +P340+ P312 P333 + P313 P391	Keep out of reach of children Avoid breathing mist or vapours Wash skin thoroughly after handling. Wear protective gloves. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. If skin irritation or rash occurs: Get medical advice/attention. Collect spillage.

Hazardous components which must be listed on the label:
- azoxystrobin (ISO)
- C16-18 alcohols, ethoxylated
- difenoconazole
- 1,2-benzisothiazol-3(2H)-one

Additional Labelling
EUH401: To avoid risks to human health and the environment, comply with the instructions for use.

2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3. COMPOSITION / INFORMATION ON INGREDIENTS
3.2 Mixtures
Components

Chemical Name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Azoxystrobin (ISO)	131860-33-8 607-256-00-8	Acute Tox. 3; H331 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1010 M-Factor (Chronic aquatic toxicity): 1010	>= 10 - < 20

Chemical Name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
C16-18 alcohols, ethoxylated	68439-49-6 500-212-8	Acute Tox.4; H302 Eye Dam.1; H318	>= 10 - < 20
Difenoconazole	119446-68-3	Acute Tox. 4; H302 Eye Irrit. 2; H319 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10	>= 10 - < 20
Residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts	68425-94-5	Skin Irrit. 2; H315 Eye Dam. 1; H318	>= 1 - < 3
1,2-benzisothiazol-3(2H)-one	2634-33-5 220-120-9 613-088-00-6 01-2120761540-60	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 2; H411 M-Factor (Acute aquatic toxicity): 1	>= 0.025 - < 0.05
Substances with a workplace exposure limit :			
propane-1,2-diol	57-55-6 200-338-0 01-2119456809-23		>= 1 - < 10

For explanation of abbreviations see section 16

4. FIRST-AID MEASURES

4.1 Description of first aid measures

General advice: Have the product container, label or Safety Data Sheet with you when calling the emergency number, a poison control center or physician, or going for treatment.
If inhaled: Move the victim 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.
In case of 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.
In case of 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.
If swallowed: If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting.

4.2 Most Important symptoms and effects, both acute and delayed

Symptoms: Nonspecific. No symptoms known or expected.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: There is no specific antidote available. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:

Extinguishing media - small fires

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Extinguishing media - large fires

Alcohol-resistant foam or Water spray

Unsuitable extinguishing media:

Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

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.

5.3 Advice for fire-fighters

Special protective equipment for firefighters: Wear full protective clothing and 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

6.1 Personal precautions, protective equipment and emergency procedures

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

6.2 Environmental precautions

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up: Contain spillage, and then collect 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). Clean contaminated surface thoroughly. Clean with detergents. Avoid solvents. Retain and dispose of contaminated wash water.

6.4 Reference to other sections

For disposal considerations see section 13., Refer to protective measures listed in sections 7 and 8.

---

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling: No special protective measures against fire required. Avoid contact with skin and eyes. When using do not eat, drink or smoke. For personal protection see section 8.

7.2 Conditions for safe storage, including any incompatibilities

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 feedingstuffs.

Further information on storage stability: Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

7.3 Specific end use(s)

Specific use(s): For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

---

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
azoxystrobin (ISO)	131860-33-8	TWA	4 mg/m³	SYNGENTA
difenoconazole	119446-68-3	TWA	5 mg/m³	SYNGENTA
propane-1,2-diol	57-55-6	TWA (particles)	10 mg/m³	GB EH40
		TWA (Total vapour and particles)	150 ppm 474 mg/m³	GB EH40

Derived No Effect Level (DNEL):

Substance name	End Use	Exposure routes	Potential health effects	Value
propane-1,2-diol	Workers	Inhalation	Long-term systemic effects	168 mg/m³
	Consumers	Inhalation	Long-term local effects	10 mg/m³
	Consumers	Inhalation	Long-term systemic effects	30 mg/m³
	Workers	Inhalation	Long-term local effects	10 mg/m³
1,2-benzisothiazol-3(2H)-one	Workers	Inhalation	Long-term systemic effects	6.81 mg/m³
	Workers	Dermal	Long-term systemic effects	0.966 mg/kg
	Consumers	Inhalation	Long-term systemic effects	1.2 mg/m³
	Consumers	Dermal	Long-term systemic effects	0.345 mg/kg

Predicted No Effect Concentration (PNEC):

Substance name	Environmental Compartment	Value
propane-1,2-diol	Fresh water	260 mg/l
	Marine water	26 mg/l
	Intermittent use/release	183 mg/l
	Sewage treatment plant	20000 mg/l
	Marine sediment	57.2 mg/kg
	Fresh water sediment	572 mg/kg
	Soil	50 mg/kg
1,2-benzisothiazol-3(2H)-one	Fresh water	0.00403 mg/l
	Marine water	0.000403 mg/l
	Sewage treatment plant	1.03 mg/l
	Fresh water sediment	0.0499 mg/kg
	Marine sediment	0.00499 mg/kg
	Freshwater - intermittent	0.0011 mg/l
	Marine water - intermittent	0.000110 mg/l
	Soil	3 mg/kg

8.2 Exposure controls

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. Maintain air concentrations below occupational exposure standards. Where necessary, seek additional occupational hygiene advice.

Personal protective equipment

Eye protection: No special protective equipment required.

Hand protection

Material: Nitrile rubber

Break through time: > 480 min

Glove thickness: 0.5 mm

Remarks: Wear protective gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin and body protection: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Remove and wash contaminated clothing before re-use. Wear as appropriate: Impervious clothing

Respiratory protection: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Suitable respiratory equipment: Respirator with combination filter for vapour/particulate (EN 141)

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

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.

---

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance:	Liquid
Colour:	Light yellow to yellow
Odour:	Weak
Odour Threshold:	No data available.
pH:	5 - 9 Concentration: 1 % w/v 7.5 - 8.5 (20 °C) Concentration: 100 % w/v
Melting point/range:	No data available
Boiling point/boiling range:	No data available
Flash point:	Method: Pensky-Martens closed cup does not flash
Evaporation rate:	No data available
Flammability (solid, gas):	No data available

Lower explosion limit:	No data available
Upper explosion limit:	No data available
Relative vapour density:	No data available
Density:	1.11 g/cm³ (20 °C)
Solubility(ies)	
Solubility in other solvents:	No data available
Partition Coefficient n-octanol/water:	No data available
Autoignition temperature:	505 °C
Decomposition temperature:	No data available
Viscosity, dynamic:	169 - 646 mPa.s (20 °C) 98.0 - 472 mPa.s (40 °C)
Explosive properties:	Not explosive
Oxidizing properties:	The substance or mixture is not classified as oxidizing.

9.2 Other Information

Surface tension:	27.9 mN/m, 20 °C
Particle size :	No data available

---

10. STABILITY AND REACTIVITY

10.1 Reactivity: None reasonably foreseeable.

10.2 Chemical Stability: Stable under normal conditions.

10.3 Possibility of hazardous reactions: Hazardous reactions: No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid: Conditions to avoid: No decomposition if used as directed.

10.5 Incompatible materials: Materials to avoid: None known.

10.6 Hazardous decomposition products: Hazardous decomposition products: No hazardous decomposition products are known.

---

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Information on likely routes of exposure: Ingestion, Inhalation, Skin contact, Eye contact

Acute toxicity

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 Assessment: The substance/mixture is not toxic on inhalation as defined by dangerous goods regulations.
Acute dermal toxicity:	LD50 (Rat, male and female): > 2,000 mg/kg Assessment: The substance or mixture has no acute dermal toxicity.

Components:

azoxystrobin (ISO):

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

Acute toxicity estimate: 0.7 mg/l
Test atmosphere: dust/mist
Method: Acute toxicity estimate according to Regulation (EC) No. 1272/2008

Acute dermal toxicity: LD50 (Rat, male and female): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

C16-18 alcohols, ethoxylated:
Acute oral toxicity: Assessment: The component/mixture is moderately toxic after single ingestion.

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

1,2-benzisothiazol-3(2H)-one:
Acute oral toxicity: LD50 (Rat, male): 670 mg/kg

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation
Product:
Species: Rabbit
Result: No skin irritation
Components:
azoxystrobin (ISO):
Species: Rabbit
Result: No skin irritation
difenoconazole:
Species: Rabbit
Result: No skin irritation
Residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:
Method : in vitro skin corrosion test
Result : Irritating to skin.
1,2-benzisothiazol-3(2H)-one:
Species : Rabbit
Result : Mild skin irritation

Serious eye damage/eye irritation
Product:
Species: Rabbit
Result: No eye irritation
Components:
azoxystrobin (ISO):
Species: Rabbit
Result: No eye irritation

C16-18 alcohols, ethoxylated:
Result: Irreversible effects on the eye
difenoconazole:
Species: Rabbit
Result: Irritation to eyes, reversing within 7 days
Residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:
Method : in vitro eye irritation test
Result : Risk of serious damage to eyes.
1,2-benzisothiazol-3(2H)-one:
Species : Rabbit
Result : Risk of serious damage to eyes.

Respiratory or skin sensitisation
Product:
Test Type: Buehler Test
Species: Guinea pig
Result: The product is a skin sensitiser, sub-category 1B.
Components:
azoxystrobin (ISO):
Species: Guinea pig
Result: Did not cause sensitisation on laboratory animals.
difenoconazole:
Species: Guinea pig
Result: Did not cause sensitisation on laboratory animals.
1,2-benzisothiazol-3(2H)-one:
Result: Probability or evidence of skin sensitisation in humans

Germ cell mutagenicity
Components:
azoxystrobin (ISO):
Germ cell mutagenicity- Assessment: Animal testing did not show any mutagenic effects.
difenoconazole:
Germ cell mutagenicity- Assessment: Animal testing did not show any mutagenic effects.
1,2-benzisothiazol-3(2H)-one:
Germ cell mutagenicity- Assessment: Weight of evidence does not support classification as a germ cell mutagen.

Carcinogenicity
Components:
azoxystrobin (ISO):
Carcinogenicity - Assessment: No evidence of carcinogenicity in animal studies.
difenoconazole:
Carcinogenicity - Assessment: Weight of evidence does not support classification as a carcinogen.

Reproductive toxicity
Components:
azoxystrobin (ISO):
Reproductive toxicity - Assessment: No toxicity to reproduction

difenoconazole:
Reproductive toxicity - Assessment: No toxicity to reproduction

STOT - repeated exposure
Components:
azoxystrobin (ISO):
Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity
Components:
difenoconazole:
Remarks: No adverse effect has been observed in chronic toxicity tests.

---

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Product:

Toxicity to fish:	LC50 (*Oncorhynchus mykiss* (rainbow trout)): 1.7 mg/l Exposure time: 96 h LC50 (*Cyprinus carpio* (Carp)): 4.2 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates:	EC50 (*Daphnia magna* (Water flea)): [illegible].1 mg/l Exposure time: 48 h
Toxicity to algae:	ErC50 (*Pseudokirchneriella subcapitata* (green algae)): 3.9 mg/l Exposure time: 96 h NOEC (*Pseudokirchneriella subcapitata* (green algae)): 0.23 mg/l End point: Growth rate Exposure time: 96 h

Components:
azoxystrobin (ISO):

Toxicity to fish:	LC50 (*Oncorhynchus mykiss* (rainbow trout)): 0.47 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates:	EC50 (*Daphnia magna* (Water flea)): 0.28 mg/l Exposure time: 48 h EC50 (*Americamysis bahia* (Mysid shrimp)): 0.055 mg/l Exposure time: 96 h
Toxicity to algae:	ErC50 (*Pseudokirchneriella subcapitata* (green algae)): 2 mg/l Exposure time: 96 h NOEC (*Pseudokirchneriella subcapitata* (green algae)): 0.038 mg/l End point: Growth rate Exposure time: 96 h ErC50 (*Navicula pelliculosa* (Freshwater diatom)): 0.301 mg/l Exposure time: 96 h NOEC (*Navicula pelliculosa* (Freshwater diatom)): 0.02 mg/l End point: Growth rate Exposure time: 96 h
M-Factor (Acute aquatic toxicity):	10

Toxicity to microorganisms:	IC50 (*Pseudomonas putida*): > 3.2 mg/l Exposure time: 6 h
Toxicity to fish (Chronic toxicity):	NOEC: 0.16 mg/l Exposure time: 28 d Species: *Oncorhynchus mykiss* (rainbow trout) NOEC: 0.147 mg/l Exposure time: 33 d Species: *Pimephales promelas* (fathead minnow)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):	NOEC: 0.044 mg/l Exposure time: 21 d Species: *Daphnia magna* (Water flea) NOEC: 0.0095 mg/l Exposure time: 28 d Species: *Americamysis bahia* (Mysid shrimp)
M-Factor (Chronic aquatic toxicity):	10

difenoconazole:

Toxicity to fish:	LC50 (*Oncorhynchus mykiss* (rainbow trout)): 1.1 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates:	EC50 (*Daphnia magna* (Water flea)): 0.77 mg/l Exposure time: 48 h EC50 (*Americamysis bahia* (Mysid shrimp)): 0.15 mg/l Exposure time: 96 h
Toxicity to algae:	EC50 (*Navicula pelliculosa* (Freshwater diatom)): 0.091 mg/l Exposure time: 72 h NOEC (*Navicula pelliculosa* (Freshwater diatom)): 0.053 mg/l Exposure time: 72 h ErC50 (*Desmodesmus subspicatus* (green algae)): 0.0876 mg/l Exposure time: 72 h EC50 (*Desmodesmus subspicatus* (green algae)): 0.015 mg/l End point: Growth rate Exposure time: 72 h
M-Factor (Acute aquatic toxicity):	10
Toxicity to microorganisms:	EC50 (activated sludge): > 100 mg/l Exposure time: 3 h
Toxicity to fish (Chronic toxicity):	NOEC: 0.0076 mg/l Exposure time: 34 d Species: *Pimephales promelas* (fathead minnow)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):	NOEC: 0.0056 mg/l Exposure time: 21 d Species: *Daphnia magna* (Water flea) NOEC: 0.0023 mg/l Exposure time: 28 d Species: *Americamysis*
M-Factor (Chronic aquatic toxicity):	10

1,2-benzisothiazol-3(2H)-one:

Toxicity to fish :	LC50 (*Oncorhynchus mykiss* (rainbow trout)): 2.18 mg/l Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:	EC50 (*Daphnia magna* (Water flea)): 2.94 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants:	ErC50 (*Raphidocelis subcapitata* (freshwater green alga)): 0.15 mg/l Exposure time: 72 h EC10 (*Raphidocelis subcapitata* (freshwater green alga)): 0.04 mg/l End point: Growth rate Exposure time: 72 h
M-Factor (Acute aquatic toxicity):	1
Toxicity to fish (Chronic toxicity):	NOEC: 0.3 mg/l Exposure time: 28 d Species: *Oncorhynchus mykiss* (rainbow trout)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):	NOEC: 1.7 mg/l Exposure time: 21 d Species: *Daphnia* (water flea)

12.2 Persistence and degradability

Components:

azoxystrobin (ISO):

Biodegradability: Result: Not readily biodegradable.

Stability in water: Degradation half life: 214 d

Remarks: The substance is stable in water.

difenoconazole:

Biodegradability: Result: Not readily biodegradable.

Stability in water: Degradation half life: 1 d

Remarks: Product is not persistent.

Residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:

Biodegradability : Result: Not readily biodegradable.

1,2-benzisothiazol-3(2H)-one:

Biodegradability : Result: rapidly degradable

12.3 Bioaccumulative potential

Components:

azoxystrobin (ISO):

Bioaccumulation: Remarks: Does not bioaccumulate.

difenoconazole:

Bioaccumulation: Remarks: High bioaccumulation potential.

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

1,2-benzisothiazol-3(2H)-one:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

12.4 Mobility in soil

Components:

azoxystrobin (ISO):

Distribution among environmental compartments: Remarks: Azoxystrobin has low to very high mobility in soil.

Stability in soil: Dissipation time: 80 d
Percentage dissipation: 50 % (DT50)
Remarks: Product is not persistent.

difenoconazole:

Distribution among environmental compartments: Remarks: Low mobility in soil.

Stability in soil: Dissipation time: 149 - 187 d
Percentage dissipation: 50 % (DT50)
Remarks: Product is not persistent.

12.5 Results of PBT and vPvB assessment

Product:

Assessment:
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Components:

azoxystrobin (ISO):

Assessment: This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

difenoconazole:

Assessment: This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

1,2-benzisothiazol-3(2H)-one:

Assessment: This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

12.6 Other adverse effects

No data available.

---

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product:

Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer. 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 to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

---

14. TRANSPORT INFORMATION

14.1 UN number

ADR: UN 3082
RID: UN 3082
IMDG: UN 3082
IATA: UN 3082

14.2 UN proper shipping name

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)

ADR: 9
RID: 9
IMDG: 9
IATA: 9

14.4 Packing group

ADR
Packing group: III
Classification Code: M6
Hazard Identification Number: 90
Labels: 9
Tunnel restriction code: (-)

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

ADR: Environmentally hazardous: yes
RID: Environmentally hazardous: yes
IMDG: Marine pollutant: yes
IATA (Passenger): Marine pollutant: yes
IATA (Cargo): Marine pollutant: yes

14.6 Special precautions for user
The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

SECTION 15: Regulatory information
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Relevant EU provisions transposed through retained EU law
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII): Conditions of restriction for the following entries should be considered: methanol (Number on list 69)
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).: Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast): Not applicable
Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals: Not applicable
UK REACH List of substances subject to authorisation (Annex XIV): Not applicable
Number on list 3Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

		Quantity 1	Quantity 2
E1	ENVIRONMENTAL HAZARDS	100 t	200 t

15.2 Chemical Safety Assessment
A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

---

16. OTHER INFORMATION
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.
H411: Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.:	Acute toxicity
Aquatic Acute:	Acute aquatic toxicity
Aquatic Chronic:	Chronic aquatic toxicity
Eye Dam.:	Serious eye damage
Eye Irrit.:	Eye irritation

Skin Irrit.:	Skin irritation
Skin Sens.:	Skin sensitisation
GB EH40 :	UK. EH40 WEL - Workplace Exposure Limits
GB EH40 / TWA :	Long-term exposure limit (8-hour TWA reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50% of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:		**Classification procedure:**
Acute Tox. 4	H332	Based on product data or assessment
Skin Sens. 1B	H317	Based on product data or assessment
Aquatic Chronic 1	H410	Calculation method

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