



syngenta®

Product registration number: PCS No. 06993

UFI: 1NN5-V0VQ-H00C-FQ3M



ANGLE is a suspension concentrate containing 125 g/L of Azoxystrobin, 125 g/L of Difenconazole

For the control of black leg (*Leptosphaeria maculans*) and Sclerotinia stem rot (*Sclerotinia sclerotiorum*) on winter oilseed rape, and the control of leaf spot (*Cercospora beticola*), powdery mildew (*Erysiphe betae*), rust (*Uromyces betae*) and *Rhizoctonia solani* on fodder beet and sugar beet.

SAFETY INFORMATION

FOR PROFESSIONAL USE ONLY

ANGLE is a suspension concentrate containing 125 g/L of Azoxystrobin, 125 g/L of Difenconazole.

Warning

Harmful if swallowed.

Harmful if inhaled.

Very toxic to aquatic life with long lasting effects.

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

Wash skin thoroughly after handling.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.

Collect Spillage.

Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except triple rinsed empty clean containers which can be disposed of as non-hazardous waste.

Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

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

PCS: 06993

UFI: 1NN5-V0VQ-H00C-FQ3M



IN CASE OF TOXIC OR TRANSPORT EMERGENCY RING +44 (0) 1484 53844 (24HR)

Authorisation Holder	Marketing Company
Syngenta UK Limited CPC4, Capital Park, Fulbourn, Cambridge, CB21 5XE Tel: +44 (0) 1223 883400	Syngenta Ireland Ltd Block 6, Cleaboy Business Park, Old Kilmeaden Road, Waterford, Ireland Tel: (051) 377203

L1102357 IREL/04B PPE 4181350

5 litres

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IMPORTANT INFORMATION

Crop	Maximum individual dose (L/ha)	Maximum number of treatments (per crop)	Minimum spray interval (days)	Latest time of application
Winter Oilseed rape	1	2		Up to and including end of flowering (BBCH GS69)
Sugarbeet and fodder beet	1	2	21	Up to and including beet root has reached harvestable size (BBCH GS49), and not less than 35 days before harvest

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

Additional Safety Information**(a) Operator protection**

WHEN USING DO NOT EAT DRINK OR SMOKE.

WASH SPLASHES from skin and eyes immediately.

DO NOT BREATHE SPRAY.

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

WASH HANDS AND EXPOSED SKIN before meals and after work.

(b) Environmental protection

To protect non-target aquatic organisms, respect an unsprayed buffer zone of 5m to surface waters.* 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.

* To reduce this buffer zone please refer to PRCD Guidance - STRIPE (Surface water Tool for Reducing the Impact of Pesticides in the Environment).

(c) Storage and Disposal

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.

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

KEEP AWAY FROM FOOD DRINK AND ANIMAL FEEDING STUFFS.

KEEP OUT OF REACH OF CHILDREN.

DO NOT RE-USE CONTAINER FOR ANY PURPOSE

This leaflet is part of the approved Product Label.

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.

GENERAL INFORMATION

Angle is a suspension concentrate containing 125 g/l azoxystrobin and 125 g/l difenoconazole. Angle has systemic activity, with protectant properties for use in all commercial varieties of winter oilseed rape, sugarbeet and fodder beet.

RESTRICTIONS

Certain apple varieties are highly sensitive to azoxystrobin. As a precaution Angle should not be applied when there is a risk of spray drift onto neighbouring apple crops. Spray equipment used to apply Angle to other crops should not be used to treat apples.

DISEASES CONTROLLED

Winter Oilseed rape

Sclerotinia stem rot (*Sclerotinia sclerotiorum*)

Stem canker (*Phoma lingam*)

Sugarbeet and fodder beet

Powdery mildew (*Erysiphe betae*)

Rust (*Uromyces betae*)

Ramularia leaf spot (*Ramularia beticola*)

Cercospora leaf spot (*Cercospora beticola*)

Rhizoctonia solani

CROP SPECIFIC INFORMATION

For the control of black leg (*Leptosphaeria maculans*) and Sclerotinia stem rot (*Sclerotinia sclerotiorum*) on oilseed rape, and the control of leaf spot (*Cercospora beticola*), powdery mildew (*Erysiphe betae*), rust (*Uromyces betae*) and *Rhizoctonia solani* on fodder beet and sugar beet.

Before applying ANGLE, ensure the crop is free from any stress caused by environmental or agronomic effects. Best results will be achieved from applications made as a protectant treatment following a disease risk assessment or the use of appropriate decision support systems.

WINTER OILSEED RAPE

Rate of Use

Apply 1 liter per hectare

The maximum number of applications to Winter Oilseed rape is 2 per crop.

Latest time of application - Up to and including end of flowering (BBCH GS69)

Stem canker (*Phoma lingam*)

Timing: Spray protectively with 1 litre of ANGLE per hectare in the Autumn for the control of Stem canker (*Phoma lingam*) from the 4 expanded true leaf stage (GS 14). Where appropriate, a second application can be made in the Spring from the start of stem elongation and no later than individual flower bud visible (GS 30-55).

Rate of Use: 1 litre per hectare. Two applications per crop.

Sclerotinia stem rot (*Sclerotinia sclerotiorum*)

Timing: Spray one application protectively with 1 litre of ANGLE per hectare in the Spring for the control of Sclerotinia stem rot (*Sclerotinia sclerotiorum*) from yellow bud until the end of flowering (GS 59-69).

Rate of Use: 1 litre per hectare

SUGARBEET AND FODDER BEET

Rate of Use

Apply 1 liter per hectare

The maximum number of applications to Sugarbeet and fodder beet is 2 per crop.

Latest time of application - Up to and including beet root has reached harvestable size (BBCH GS49), and not less than 35 days before harvest

A minimum interval of 21 days days must be observed between applications.

Timing: Apply ANGLE at the first signs of the disease, before the disease becomes established. ANGLE gives prolonged protection from re-infection, but a second application can be applied where crops are at risk from later attacks. Apply ANGLE only between Crop cover complete: leaves cover 90% of ground and beet root has reached harvestable size (BBCH GS39-49).

MIXING AND SPRAYING

Ensure that the sprayer is clean and correctly set to give an even application at the required volume. Half-fill the spray tank with clean water and start agitation. Shake the container and add the required amount of ANGLE to the sprayer using a filling device (e.g. induction bowl or closed transfer unit) or by direct addition to the sprayer tank.

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.

Do not leave the spray liquid in the sprayer for long periods (such as during meal breaks or overnight).

WATER VOLUME AND SPRAYING

Apply in a recommended 200-400 litres of water per hectare using a medium quality spray (BCPC) at a pressure of at least 2 bar. Apply through conventional crop spraying equipment.

CLEANING

Thoroughly wash out sprayer according to the manufacturer's guidelines and dispose of washings and clean containers according to DEFRA Code of Practice and local water authority guidelines.

RESISTANCE MANAGEMENT

ANGLE contains azoxystrobin, a strobilurin belonging to the Quinone outside inhibitors (QoI) (FRAC group 11) and difenoconazole, a demethylation inhibitor (DMI) fungicide (FRAC group 3). The number of QoI containing applications should be no more than ½ (50%) of the total number of fungicide applications per season.

Strains of Light Leaf Spot resistant to DMI fungicides are known to exist. To avoid development of resistance, apply product protectively in response to disease forecasts and should not be relied upon for its curative potential.

Where possible, when Light Leaf Spot is present, avoid the use of DMI based fungicides when targeting other diseases such as Sclerotinia at mid flowering.

Use ANGLE 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 ANGLE 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.

COMPANY ADVISORY INFORMATION SECTION

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

SAFETY DATA SHEET - V1.0

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY/ UNDERTAKING

1.1 Product Identifier

Trade name: ANGLE

Design code: A18253A

Product Registration Number: PCS 06993

Unique Formula Identifier (UFI): 1NN5-V0VQ-H00C-FQ3M

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

Company: Syngenta Ireland Limited, Block 6 Cleaboy Business Park, Old Kilmeaden Road, Waterford, Ireland

Telephone: (051) 377203

Telefax: (051) 354748

E-mail address of person responsible for the SDS: cropsales.ie@syngenta.com

1.4 Emergency telephone number

Emergency telephone number: Syngenta +44 1484 538444

Poisons Information Centre of Ireland

Members of Public: +353 (1) 809 2166. (8.00 a.m. to 10.00 p.m. 7 days a week)

Healthcare Professionals: +353 (1) 809 2566 (24-hour service)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4 - H302: Harmful if swallowed.


Acute toxicity, Category 4 - H332: Harmful if inhaled.

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)

Hazard pictograms	
Signal Word	Warning
Hazard Statements	H302 Harmful if swallowed. H332 Harmful if inhaled. H410 Very toxic to aquatic life with long lasting effects.
Precautionary Statements	P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P271 Use only outdoors or in a well-ventilated area. P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable or breathing. Call a POISON CENTER/ doctor if you feel unwell. +P312 P391 Collect spillage. P501 Dispose of contents/container to a licensed hazardous waste disposal contractor or collection site except for empty triple rinsed clean containers which can be disposed of as non-hazardous waste.

Additional Labelling

EUH208 Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

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.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 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)
C16-18 alcohols, ethoxylated	68439-49-6 500-212-8	Acute Tox. 4; H302 Eye Dam. 1; H318	>= 20 - < 30
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): 10 M-Factor (Chronic aquatic toxicity): 10 Acute toxicity estimate Acute inhalation toxicity (dust/mist): 0.7 mg/l	>= 10 - < 20
difenoconazole	19446-68-3	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
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 specific concentration limit Skin Sens. 1; H317 >= 0.05 %	>= 0.025 - < 0.05

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 firefighting: 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.

7.3 Specific end uses

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/m ³	Syngenta
difenoconazole	119446-68-3	TWA	5 mg/m ³	Syngenta

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
1,2-benzisothiazol-3(2H)-one	Workers	Inhalation	Long-term systemic effects	6.81 mg/m ³
	Workers	Dermal	Long-term systemic effects	0.966 mg/kg
	Consumers	Inhalation	Long-term systemic effects	1.2 mg/m ³

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes
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

Remarks: No special protective equipment required.

Skin and body protection: No special protective equipment required.

Select skin and body protection based on the physical job requirements.

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

Suitable respiratory equipment: Respirator with a particle filter (EN 143)

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.

Filter type: Particulates type (P)

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.

Environmental exposure controls

Water: 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state: fluid

Colour: yellowish

Odour: No data available

Odour Threshold: No data available

Melting point/range: No data available

Boiling point/boiling range: No data available

Flammability: No data available

Upper explosion limit / Upper flammability limit: No data available

Lower explosion limit / Lower flammability limit: No data available

Flash point: Method: Pensky-Martens closed cup, does not flash

Auto-ignition temperature: 460 °C

Decomposition temperature: No data available

pH: 7.4, Concentration: 100 %w/v

Viscosity, kinematic: No data available

Water solubility: No data available

Solubility in other solvents: No data available

Partition coefficient: n-octanol/water: No data available

Vapour pressure: No data available

Density: 1.094 g/cm³

Relative vapour density: No data available

Particle size: No data available

9.2 Other Information

Explosives: Not explosive

Oxidizing properties: The substance or mixture is not classified as oxidizing.

Evaporation rate: 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 (Rat, female): 1,049 mg/kg

Acute inhalation toxicity: LC50 (Rat, male and female): 1.01 - 2.58 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:

C16-18 alcohols, ethoxylated:

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

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

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

difenoconazole:

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

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

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:

C16-18 alcohols, ethoxylated:

Result: Irreversible effects on the eye

azoxystrobin (ISO):

Species: Rabbit

Result: No eye irritation

difenoconazole:

Species: Rabbit

Result: Irritation to eyes, reversing within 7 days

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

Species: Rabbit

Result: Risk of serious damage to eyes.

Respiratory or skin sensitisation

Product:

Species: Guinea pig

Result: Did not cause sensitisation on laboratory animals.

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 car-cinogen

Reproductive toxicity

Components:

azoxystrobin (ISO):

Reproductive toxicity - Assessment: No toxicity to reproduction

difenoconazole:

Reproductive toxicity - Assessment: No toxicity to reproduction

STOT - single exposure

Components:

difenoconazole:

Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Components:

azoxystrobin (ISO):

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

difenoconazole:

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Product:

Toxicity to fish:

LC50 (*Oncorhynchus mykiss* (rainbow trout)): 1.5 mg/l
Exposure time: 96 h

Toxicity to daphnia and
other aquatic invertebrates:

EC50 (*Daphnia magna* (Water flea)): 1.8 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants:

EC50 (*Raphidocelis subcapitata* (freshwater green alga)): 3.8 mg/l
Exposure time: 96 h
EC10 (*Raphidocelis subcapitata* (freshwater green alga)): 0.61 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*): 0.055 mg/l
Exposure time: 96 h

Toxicity to algae/aquatic plants:

ErC50 (*Raphidocelis subcapitata* (freshwater green alga)): 2 mg/l
Exposure time: 96 h
NOEC (*Raphidocelis subcapitata* (freshwater green alga)): 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 (<i>Pseudomonas putida</i>): > 3.2 mg/l Exposure time: 6 h
Toxicity to fish (Chronic toxicity):	NOEC: 0.16 mg/l Exposure time: 28 d Species: <i>Oncorhynchus mykiss</i> (rainbow trout) NOEC: 0.147 mg/l Exposure time: 33 d Species: <i>Pimephales promelas</i> (fathead minnow)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):	NOEC: 0.044 mg/l Exposure time: 21 d Species: <i>Daphnia magna</i> (Water flea) NOEC: 0.0095 mg/l Exposure time: 28 d Species: <i>Americamysis</i>
M-Factor (Chronic aquatic toxicity):	10
difenoconazole:	
Toxicity to fish:	LC50 (<i>Oncorhynchus mykiss</i> (rainbow trout)): 1.1 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates:	EC50 (<i>Daphnia magna</i> (Water flea)): 0.77 mg/l Exposure time: 48 h EC50 (<i>Americamysis</i>): 0.15 mg/l Exposure time: 96 h
Toxicity to algae/aquatic plants:	EC10 (<i>Navicula pelliculosa</i> (Freshwater diatom)): 0.0697 mg/l End point: Growth rate Exposure time: 72 h ErC50 (<i>Desmodesmus subspicatus</i> (green algae)): 0.0876 mg/l Exposure time: 72 h EC10 (<i>Desmodesmus subspicatus</i> (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):	EC10: 0.01298 mg/l Exposure time: 34 d Species: <i>Pimephales promelas</i> (fathead minnow)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):	EC10: 0.0078 mg/l Exposure time: 21 d Species: <i>Daphnia magna</i> (Water flea) EC10: 0.00572 mg/l Exposure time: 28 d Species: <i>Americamysis</i>
1,2-benzisothiazol-3(2H)-one:	
Toxicity to fish:	LC50 (<i>Oncorhynchus mykiss</i> (rainbow trout)): 2.18 mg/l Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:	EC50 (<i>Daphnia magna</i> (Water flea)): 2.94 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants:	ErC50 (<i>Raphidocelis subcapitata</i> (freshwater green alga)): 0.15 mg/l Exposure time: 72 h EC10 (<i>Raphidocelis subcapitata</i> (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: <i>Oncorhynchus mykiss</i> (rainbow trout)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):	NOEC: 1.7 mg/l Exposure time: 21 d Species: <i>Daphnia</i> (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.

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

Biodegradability: Result: rapidly degraded

12.3 Bioaccumulative potential

Components:

azoxystrobin (ISO):

Bioaccumulation: Remarks: Does not bioaccumulate.

difenoconazole:

Bioaccumulation: Remarks: Does not bioaccumulate.

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: Slightly mobile in soils

Stability in soil: Dissipation time: 122 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 Endocrine disrupting properties

Product:

Assessment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 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.

Waste Code: uncleaned packagings

15 01 10, packaging containing residues of or contaminated by hazardous substances

14. TRANSPORT INFORMATION

14.1 UN Number:

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

14.2 UN proper shipping name

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

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

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

IATA: Environmentally hazardous substance, liquid, n.o.s.
(AZOXYSTROBIN, DIFENOCONAZOLE)

14.3 Transport hazard class(es)

ADR	IMDG	RID	IATA
9	9	9	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)

Environmentally hazardous : 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.

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulation/legislation specific for the substance or mixture

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII): Conditions of restriction for the following entries should be considered: Number on list 75, 3

If you intend to use this product as tattoo ink, please contact your vendor. methanol (Number on list 75, 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

REACH - List of substances subject to authorisation (Annex XIV): Not applicable

Seveso III: Directive 2012/18/EU of the Euro-pean Parliament and of the Council on the control of major-accident hazards involving dangerous substances. E1 ENVIRONMENTAL HAZARDS

Other regulations:

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

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: Short-term (acute) aquatic hazard

Aquatic Chronic: Long-term (chronic) aquatic hazard

Eye Dam.: Serious eye damage

Eye Irrit.: Eye irritation

Skin Irrit.: Skin irritation

Skin Sens.: Skin sensitisation

Syngenta: Syngenta Occupational Exposure Limit

Syngenta / TWA: Time weighted average

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; IECS - 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; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:

Acute Tox. 4	H302
Acute Tox. 4	H332
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Classification procedure:

Based on product data or assessment
Based on product data or assessment
Calculation method
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.