L1090594 IREL/07A PPE 4164530

Amistar®

Amistar®

syngenta

GROUP 11 FUNGICIDE

Product registration number: PCS No. 05072
UFI: 0J4H-A3HD-Y005-3695

A suspension concentrate containing 250 g/litre (23.1% w/w) of azoxystrobin

A broad spectrum fungicide for wheat, barley, oats, rye, triticale, oilseed rape, combining peas, fresh peas (vining peas, garden pea, mange tout, sugar snaps), fresh beans (broad beans, green beans), field beans, lupins, bulb onions, garlic, shallots, leeks, carrots, asparagus, potatoes, cabbage, cauliflower, Brussels sprouts, kale (winter greens), collard (spring greens), broccoli, calabrese, outdoor and protected crops of strawberry, outdoor and protected crops of lettuce, endive (including frisee, escarole), chicory (radicchio).

IN CASE OF TOXIC OR TRANSPORT EMERGENCY RING +44 (0) 1484 538444 ANY TIME (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

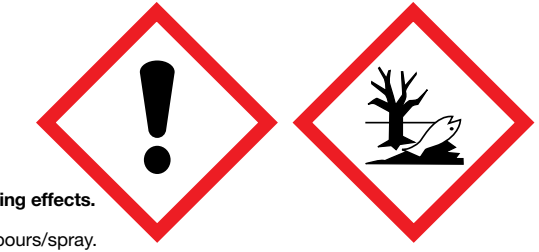
PROTECT FROM FROST.
SHAKE WELL BEFORE USE

4 x 5 litres

5 391513 810008

FOR PROFESSIONAL USE ONLY

To avoid risks to human health and the environment comply with the instructions for use.
A suspension concentrate containing 250 g/litre (23.1% w/w) of azoxystrobin



Warning
Harmful if inhaled.
Very toxic to aquatic life with long lasting effects.

Avoid breathing dust/fume/gas/mist/vapours/spray.
Use only outdoors or in a well-ventilated area.
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 for triple rinsed empty clean containers which can be disposed of as non-hazardous waste.
Contains 1,2-benzisothiazol-3-one. May produce an allergic reaction.

PCS No. 05072

4 x 5 litres

Amistar®

CONDITIONS OF USE

FOR USE ONLY AS AN AGRICULTURAL/HORTICULTURAL FUNGICIDE

Crop	Maximum individual dose (litres/product/ha)	Maximum number of treatments (per crop)	Maximum total dose (litres/ product /ha)	Latest time of application
Wheat, rye and triticale	1	2	2	Before watery ripe stage (GS 71)
Barley, oats	1	2	2	Before beginning of flowering (GS 61)
Oilseed rape (winter and spring)	1	2	2	21 days before harvest
Peas – combining, field beans, lupins	1	2	2	35 days before harvest
Broad beans, vining peas	1	2	2	14 days before harvest.
Dwarf french bean	1	2	2	7 days before harvest
Bulb onions, garlic, shallots	1	3	3	14 days before harvest.
Leeks	1	3	3	21 days before harvest
Carrots	1	3	3	14 days before harvest
Asparagus (outdoor)	1	2	2	Before senescence
**Brussels sprout, Cabbage, cauliflower, kale (winter greens), collards (spring greens), broccoli and calabrese – all outdoor	1	2	2	14 days before harvest
Strawberries (outdoor and protected)	1	3	3	3 days before harvest
**Lettuce, endive (including frisee, escarole), chicory (radicchio), (outdoor and protected)	1	2	2	14 days before harvest
Potato (in-furrow)	3	1	3	At planting, applied as an in-furrow treatment
Potato (foliar spray)	0.5	3	1.5	7 days before harvest

Other Specific Restrictions:

To reduce the risk of resistance developing in target diseases the total number of applications of product containing QoI fungicides made to any cereal crop must not exceed two.

**A maximum total dose of 500g azoxystrobin must not be exceeded within a 12 month period on the same field.

When used in a protected situation other than "permanent protection with full enclosure", a 5m aquatic buffer zone must be observed.

ADDITIONAL SAFETY PRECAUTIONS

(a) Operator protection

WASH SPLASHES from skin or eyes immediately.
DO NOT BREATHE SPRAY.
WASH HANDS AND EXPOSED SKIN before meals and after work.
For use by tractor mounted/trailed sprayer or handheld knapsack sprayer.

(b) Environmental protection

Avoid drift on to non-target plants.
To protect aquatic life, for uses on crops broccoli, calabrese, Brussel sprouts, cabbage, cauliflower, collards, lettuce and kale, the maximum total dose applied must not exceed 500 g Azoxystrobin per hectare per year.
To protect aquatic organisms respect a 5m unsprayed buffer zone to surface water.
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.

(c) Storage and disposal

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.

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

AMISTAR contains azoxystrobin, a broad spectrum fungicide from the strobilurin group. It has systemic, translaminar and protectant properties.

Azoxystrobin inhibits fungal respiration. Its mode of action is different from the action of other fungicidal groups. It should always be used in mixture with fungicides with other modes of action.

AMISTAR shows good crop safety, disease control and maintenance of green leaf area which result in significant yield benefits.

AMISTAR is best used as a protective treatment or during early stages of disease establishment. In cereals, the length of disease control is generally about four to six weeks during the period of active stem elongation, but can be more when applied at flag leaf/ear emergence.

AMISTAR is approved for application to wheat, barley, oats, rye, triticale, oilseed rape, combining peas, fresh peas (vining peas, garden pea, mange tout, sugar snaps), fresh beans (broad beans, green beans), field beans, lupins, bulb onions, garlic, shallots, leeks, carrots, asparagus, potatoes, cabbage, cauliflower, Brussels sprouts, kale (winter greens), collard (spring greens), broccoli, calabrese, outdoor and protected crops of strawberry, outdoor and protected crops of lettuce, endive (including frisee, escarole), chicory (radicchio).

RESTRICTIONS

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

Apply AMISTAR under good growing conditions with adequate soil moisture. Avoid poor growing conditions which may give less reliable results.

DISEASES CONTROLLED

Wheat
Glume Blotch (*Leptosphaeria (syn. Septoria) nodorum*)
Yellow Rust (*Puccinia striiformis*)
Brown Rust (*Puccinia recondita*)
Ear Diseases (*Cladosporium, Alternaria*)
Can reduce the severity of Take-all (*Gaeumannomyces graminis var. Tritici*)

Barley
Net Blotch (*Pyrenophora teres*) – moderate control
Brown Rust (*Puccinia hordei*)
Leaf Blotch (*Rhynchosporium secalis*) – reduction
Can reduce the severity of Take-all (*Gaeumannomyces graminis var. Tritici*)

Oats
Crown Rust (*Puccinia coronata*)

Rye and Triticale
Brown Rust (*Puccinia recondita*)
Leaf Blotch (*Rhynchosporium secalis*) - reduction
Can reduce the severity of Take-all (*Gaeumannomyces graminis var. Tritici*)

Oilseed Rape
Dark Leaf and Pod Spot (*Alternaria spp.*)
Sclerotinia stem rot (*S. sclerotiorum*) – moderate control

Combining Peas, Vining Peas, Garden Peas, Sugar Snap, Mange Tout
Green Beans
Downy mildew (*Perenospora viciae*) - reduction
Leaf and Pod Spot (*Ascochyta pisi*) – useful reduction

When AMISTAR is used to control leaf and pod spot, some control of Grey Mould (Botrytis cinerea) and Mycosphaerella blight may be achieved.

Field Beans, Broad Beans and Lupins
Rust (*Uromyces spp.*)

Leeks
Leaf rust (*Puccinia porri*)
Purple blotch (*Alternaria porri*) – moderate control
White tip (*Phytophthora porri*) – moderate control

Bulb Onions, Shallots and Garlic
Downy mildew (*Peronospora destructor*) – moderate control

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

Asparagus
Stemphylium (*Stemphylium botryosum*) - moderate control
Rust (*Puccinia asparagi*) – moderate control

Brussels Sprouts, Cabbage, Cauliflower, Kale (Winter Greens), Collards (Spring Greens), Broccoli and Calabrese
White blister (*Albugo candida*) - moderate control
Ring spot (*Mycosphaerella brassicicola*) – moderate control
Alternaria (*Alternaria brassicae and Alternaria brassicicola*) – moderate control

Lettuce, Endive (Frisse and Escarole), Chicory (Raddichio)
Downy mildew (*Bremia spp.*)

Strawberry
Powdery mildew (*Podosphaera macularis*) – moderate control

Potatoes
Stem canker and Black scurf (*Rhizoctonia solani*) in furrow only - reduction
Black dot (*Colletotrichum coccodes*) in furrow only - reduction
Early blight (*Alternaria solani*) foliar application only - moderate control

CROP SPECIFIC INFORMATION

CROPS

AMISTAR is approved for application to wheat, barley, oats, rye, triticale, oilseed rape, combining peas, fresh peas (vining peas, garden pea, mange tout, sugar snaps), fresh beans (broad beans, green beans), field beans, bulb onions, garlic, shallots, leeks, carrots, asparagus, potatoes, oilseed rape, cabbage, cauliflower, Brussels sprouts, kale (winter greens), collard (spring greens), broccoli, calabrese, outdoor and protected crops of strawberry, outdoor and protected crops of lettuce, endive (including frisee, escarole), chicory (radicchio).

WINTER & SPRING WHEAT, WINTER AND SPRING BARLEY, WINTER AND SPRING OATS, RYE & TRITICALE

Timing

Always inspect crops to assess disease development immediately before spraying. Best results will be achieved from applications made in the earliest stages of disease development or as a protectant treatment following a disease risk assessment or the use of appropriate decision support systems.
Winter and spring wheat, rye and triticale can be treated from BBCH 30-69.
Winter and Spring barley and winter and spring oats can be treated from BBCH 30-59.

For protection against ear disease (*Cladosporium* and *Alternaria*) apply AMISTAR at ear emergence.

When used to control the listed foliar diseases, AMISTAR applied at the first or second node stage of the crop can reduce the severity of Take-all infection.

Rate Of Use

1.0 litre per hectare.
The maximim number of applications to any cereal crop is two per crop

Tank Mixing

On cereal crops, AMISTAR must always be used in mixture with another product, recommended for control of the same target disease that contains a fungicide from a different cross resistance group and is applied at a dose that will give robust control.

Resistance Management

Use AMISTAR 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. You must not apply more than <u>two</u> foliar applications of QoI-containing products to any cereal crop.

Disease control may be reduced if strains of other pathogens less sensitive to azoxystrobin develop.

On cereal crops, AMISTAR must always be used in mixture with another product, recommended for control of the same target disease that contains a fungicide from a different cross resistance group and is applied at a dose that will give robust control.

Users should refer to current FRAG-UK guidelines for QoI compounds.

PEAS (COMBINING AND FRESH), GREEN BEANS, BROAD BEAN, LUPIN

Timing

AMISTAR should always be used at the first sign of disease infection or when a predictive assessment shows conditions favourable for disease development from BBCH 17-72. For optimum disease control apply AMISTAR before infection or as soon as disease is first seen in the crop. 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.

Rate Of Use

1.0 litre per hectare.

A second treatment may be required if disease pressure remains high – especially in combining peas. A minimum interval of 14 days must be observed between applications.

Peas For Processing

Where a crop of peas is destined for processing, consult your processor before treating with AMISTAR. (One year's results indicate that no taints were detected on quick frozen, canned, vining or canned combining peas)

Crop Safety

AMISTAR shows good crop safety on combining peas and fresh peas. Before applying ensure the crop is free from any stress caused by environment or agronomic effects. Check wax level if necessary using the Crystal Violet test.

Resistance Management

To avoid the likelihood of resistance developing, application of AMISTAR should be made with due regard to current FRAG-UK guidelines for QoI compounds. Do not make more than two applications of AMISTAR.

FIELD BEAN

Timing

Before applying AMISTAR, 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 from BBCH 60-69 or as a protectant treatment following a disease risk assessment or the use of appropriate decision support systems.

A second treatment may be required if disease pressure remains high. A minimum interval of 21 days must be observed between applications.

Rate Of Use

1 litre per hectare

Resistance Management

To avoid the likelihood of resistance developing, application of AMISTAR should be made with due regard to current FRAG-UK guidelines for QoI compounds. Do not make more than two applications of AMISTAR to crops of field beans. Use AMISTAR 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.

BULB ONION, GARLIC, SHALLOT, LEEK AND CARROT

Timing

Before applying AMISTAR , ensure the crop is free from any stress caused by environmental or agronomic effects. For optimum disease control AMISTAR should be used at the first sign of disease infection or preferably preventatively when a predictive assessment shows conditions favourable for disease development. 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.

Bulb onions, garlic and shallots can be treated from BBCH 14-48
Leeks can be treated from BBCH 16 – 48
Carrots can be treated from BBCH 16 - 49

Rate Of Use
1.0 litre per hectare.

Bulb onion, garlic and shallots
- For optimum downy mildew control in bulb onions, garlic and shallot a 7 to10 day spray interval should be maintained
- Applications to established downy mildew infection are unlikely to give reliable control

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

Resistance Management
Use AMISTAR 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, applications of AMISTAR should be made with due regard to current FRAC guidelines for QoI compounds as illustrated below in the following table:

Total number of fungicide spray applications per crop	1	2	3	4	5	6	7	8	9	10	11	≥12
Maximum recommended solo QoI fungicide sprays	1	1	2	2	2	2	2	3	3	3	3	4
Maximum recommended QoI fungicide sprays in mixture	1	2	2	2	2	3	3	4	4	4	4	4

No more than 3 applications of AMISTAR are permitted per crop. Refer to the IRAC website for updates on recommendations for resistance management.

ASPARAGUS (OUTDOOR)
Timing
Always inspect crops to assess disease development immediately before spraying. Best results will be achieved from applications made in the earliest stages of disease development or as a protectant treatment following a disease risk assessment or the use of appropriate decision support systems.
Asparagus can be treated from BBCH 41 – 89.

Earliest time of application : After commercial cutting
AMISTAR may only be applied after the harvest season (i.e. after commercial cutting). Where a new 'bed' is established, do not treat within three weeks of transplanting / cut the crowns.

A minimum interval of 10 days must be observed between applications.

Latest time of application : until the end of September or before the crop senescence, whichever is sooner.

AMISTAR shows good crop safety on asparagus. Before applying ensure the crop is free from any stress caused by environmental or agronomic effects.

Rate of Use
1.0 litre per hectare.

Resistance Management
AMISTAR contains azoxystrobin a member of the QoI cross resistance group. AMISTAR should be used preventatively and should not be relied on for its curative potential. Disease control may be reduced if strains of pathogens less sensitive to azoxystrobin develop.

To avoid the likelihood of resistance developing, applications of AMISTAR should be made with due regard to current FRAC guidelines for QoI compounds as illustrated below in the following table:

Total number of fungicide spray applications per crop	1	2	3	4	5	6	7	≥8
Maximum recommended solo QoI fungicide sprays	1	1	2	2	2	2	2	3
Maximum recommended QoI fungicide sprays in mixture	1	2	2	2	2	3	3	3

No more than 2 applications of AMISTAR are permitted per crop. Refer to the FRAC website for updates on recommendations for resistance management.

POTATOES

FOLIAR APPLICATION

For the control of Early blight (*Alternaria solani*).

Timing

Before applying AMISTAR, 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.

Potatoes can be treated from BBCH 51-85

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

Rate of Use

0.5 litre per hectare

A total of 3 applications can be made per season if disease pressure remains high.

Potatoes For Processing

Where a crop of potatoes is destined for processing, consult processors before treating with AMISTAR.

Resistance Management

The risk of resistance developing to AMISTAR in *Alternaria solani* is considered to be moderate. To avoid the likelihood of resistance developing, applications of AMISTAR should be made with due regard to current FRAG-UK guidelines for QoI compounds. Use AMISTAR 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.

IN-FURROW APPLICATION

Timing

AMISTAR must be applied as an in-furrow application made at the time of planting for the reduction of Stem canker, Black scurf (*Rhizoctonia solani*) and Black dot (*Colletotrichum coccodes*).

Where AMISTAR is applied as an in-furrow application, it is important to direct the spray into the planting furrow and not onto the seed tuber. Application should ensure that the AMISTAR is applied to soil around the tuber.

Rate Of Use

For in-furrow application made at planting : 3 litre per hectare

A maximum of one application per crop should be made

Advisory Information

With in-furrow application, always target the soil and not the seed tuber in order to minimise any possible delay in emergence. Wherever possible, use properly chitted seed or cold-stored seed which has not started to sprout. Using seed which has just broken dormancy may well result in emergence delays.

Using AMISTAR following earlier applications of imazalil, pencycuron or imazalil/pencycuron is likely to lead to a check in the speed of crop emergence. Effects are usually, but not always, outgrown.

Effects of soil type
Do not use AMISTAR on high organic matter soils as the product will not be effective.

Potatoes For Processing
Where a crop of potatoes is destined for processing, consult processors before treating with AMISTAR.

Resistance Management
The risk of resistance developing to AMISTAR in *Rhizoctonia solani* (Black scurf and Stem canker) and *Colletotrichum coccodes* (Black dot) is considered to be very low. AMISTAR should only be used in potato crops, which adhere to good rotation practices.

To avoid the likelihood of resistance developing to QoI compounds used to control potato late blight, application of AMISTAR should be made with due regard to current FRAG-UK guidelines for QoI compounds. If an application of AMISTAR is made, no more than two further QoI treatments should be applied sequentially as the first sprays against late blight before using an alternative product.

WINTER AND SPRING OILSEED RAPE
Timing
Before applying AMISTAR, 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.
Oilseed rape can be treated from BBCH 60-69.

A second treatment may be required if disease pressure remains high.

Sclerotinia– AMISTAR should be applied as a protectant spray during flowering. The optimum timing is early flowering to mid flowering (GS60 – GS65)

Alternaria – Apply AMISTAR as a protective spray at early pod formation when the first ten pods are longer than 4 cm, before they become knobbly and not later than the time the first spots are seen on the pods.

Note : an application of AMISTAR against *Sclerotinia* will significantly limit the development of alternaria

Rate Of Use
1 litre per hectare

Resistance Management
To avoid the likelihood of resistance developing application of AMISTAR should be made with due regard to current FRAG-UK guidelines for QoI compounds. Do not make more than two applications of AMISTAR to crops of oilseed rape. Use AMISTAR 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.

BRUSSELS SPROUTS, CABBAGE, CAULIFLOWER, KALE (WINTER GREENS), COLLARDS (SPRING GREENS), BROCCOLI AND CALABRESE
Timing
Before applying AMISTAR, 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.

Brassicas can be treated from BBCH 16-49.

A second treatment may be required if disease pressure remains high. A minimum interval of 12 days must be observed between applications to brassicae.

Rate Of Use
1 litre per hectare
A maximum total dose of 500g azoxystrobin must not be exceeded within a 12 month period on the same field.

Resistance Management
To avoid the likelihood of resistance developing, application of AMISTAR should be made with due regard to current FRAG-UK guidelines for QoI compound. Do not apply more than a total of two applications of AMISTAR to any brassica crop.

OUTDOOR AND PROTECTED LETTUCE, ENDIVE (INCLUDING FRISEE AND ESCAROLE), CHICORY (RADICCHIO)
Timing
Before applying AMISTAR, 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.
Lettuce, Endive (including frisee and escarole), and chicory (radicchio) can be treated from BBCH 14 -49.

A minimum interval of 7 days must be observed between applications for both protected and outdoor uses.

Rate of Use
1.0 litre per hectare.
A maximum total dose of 500g azoxystrobin must not be exceeded within a 12 month period on the same field.

Resistance Management
Use AMISTAR 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 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.

OUTDOOR AND PROTECTED STRAWBERRY
Timing
For optimum results apply AMISTAR as a protectant spray at the beginning of flowering. Two further applications 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 at a minimum interval of 7 days.

Strawberries can be treated from BBCH 51-89.
A minimum interval of 7 days must be observed between applications to all strawberry crops.

Rate of Use
1.0 litre per hectare.

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

Resistance Management
Use AMISTAR 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, applications of AMISTAR should be made with due regard to current FRAC guidelines for QoI compounds as illustrated below in the following table:

Total number of fungicide spray applications per crop	1	2	3	4	5	6	7
Maximum recommended solo QoI fungicide sprays	1	1	2	2	2	2	2
Maximum recommended QoI fungicide sprays in mixture	1	2	2	2	2	3	3

No more than 3 applications of AMISTAR are permitted per crop.

QUALIFIED USE RECOMMENDATION

Strawberries and Lupins

The following uses are supported by a limited amount of effectiveness data which indicate that the use of Amistar at 1.0 l/ha may provide some useful activity against Rust (*Uromyces spp.*) on Lupins and Antrhracnose (*Collectotrichum acutatum*) on strawberries

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 AMISTAR 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).

VOLUME OF WATER AND SPRAYING

OUTDOOR CROPS

Apply using a medium quality spray (BCPC) at a pressure of at least 2 bar. Apply through conventional crop spraying equipment calibrated to give an even application at the correct volume.

Strawberries : Apply in at least 300 litres of water per hectare

Brussels sprouts, cabbage, cauliflower, kale (winter greens), collards (spring greens), broccoli, calabrese: Apply in at least 250 litre of water per hectare

Green beans, broad beans: Apply in at least 150 litres of water per hectare

Lettuce and associated crops: Apply in at least 300 litres of water per hectare

Cereals, combining peas, fresh peas, field beans, lupins, oilseed rape, carrots, leek, bulb onions, garlic and shallots: Apply in at least 200 litres of water per hectare

In dense crops, increase the water volume to improve coverage

Asparagus:

For conventional tractor mounted crop spraying equipment, apply in at least 600 litres of water per hectare using a medium quality sprayer (BCPC) at a pressure of at least 2 bar.

For hand-held spraying equipment, apply in at least 200 litres of water per hectare.

Potatoes

In-furrow application use: Apply between 50 - 150 litres of water per hectare. Apply using specialist in-furrow application equipment. Contact Syngenta UK Ltd for further details on suitable manufacturers of these sprayers.

Foliar application: Apply in at least 200 litres of water per hectare.

INDOOR CROPS

Application should be made via a hydraulic nozzle applicator e.g. motorised sprayer with hand or boom lance or via a knapsack sprayer.

Lettuce and associated crops: Apply in at least 300 litres of water per hectare

Strawberry: Apply in at least 100 litres of water per hectare

AFTER SPRAYING

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

COMPANY ADVISORY INFORMATION

This information is not part of the approved label under the Plant Protection Product Regulations (2003) but provides additional Company advice on the product use.

Good Field Practice
As part of our Product Stewardship policy, Syngenta UK Ltd recommend the following precautions should also be observed :
- Wear appropriate clothing - coveralls and protective gloves, when handling the concentrate.

Agricultural Practice
Integrated Crop Management
Laboratory data indicate that when used as directed AMISTAR has no adverse effects on the following beneficial species.

Earthworm (*Eisenia fetida*); Bees (*Apis and Bombus spp.*); Parasitic Wasps (*Trichogramma cacoeciae, Aphidis spp. and Encarsia formosa*); Aphid Predators (*Coccinella septempuncata, Chrysoperia carnea, Episyrphus balteatus*); Predatory mites (*Phytoseiulus persimilis, Amblyseius degenerans*); Spider (*Pardosa spp.*); Predatory bugs (*Macrolophus caliginosus, Orius laevigatus*); Carabid Beetle (*Poecilus cupreus*).

Resistance Management
AMISTAR contains azoxystrobin a member of the QoI cross resistance group. AMISTAR should be used preventatively and should not be relied on for its curative potential. Disease control may be reduced if strains of pathogens less senstive to azoxystrobin develop.

Use AMISTAR 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 should be made with due regard to current FRAG-UK guidelines for QoI compound.

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 - V22.0
1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY/ UNDERTAKING
1.1 Product Identifier
Trade name : AMISTAR
Design code : A12705B
Product Registration Number : MAPP 18039
Unique Formula Identifier (UFI): 0J4H-03HD-Y005-36J5
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 phone No. 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 - 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	H332	Harmful if inhaled.
	H410	Very toxic to aquatic life with long lasting effects.
Supplemental Hazard Statements	EUH208	Contains 1,2-benzisothiazol-3-one. May produce an allergic reaction.
	EUH401	To avoid risks to human health and the environment, comply with the instructions for use.
Precautionary Statements	P102	Keep out of reach of children.
	P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
	P271	Use only outdoors or in a well-ventilated area.
	P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	P391	Collect spillage.
	P501	Dispose of contents/container to licensed hazardouswaste disposal contractor or collection site except for empty triple rinsed clean containers which can be disposed of as non-hazardous waste.

Hazardous components which must be listed on the label:
- azoxystrobin (ISO)

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)**
azoxystrobin (ISO)	131860-33-8 607-256-00-8	Acute Tox.3; H331 Aquatic Acute1; H400 Aquatic Chronic1; H410 M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10	>= 20 - < 25
C16-18 alcohols, ethoxylated	68439-49-6 500-212-8	Acute Tox. 4; H302 Eye Dam. 1; H318	>= 10 - < 20

Chemical Name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
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 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.
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 uses

Specific use(s) : For proper and safe use of this product please refer to the approved 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
propane-1,2-diol	57-55-6	OELV - 8 hrs (TWA) (particles)	10 mg/m³	IE OEL
		OELV - 8 hrs (TWA) (vapour and particles))	150 ppm 470 mg/m³	IE OEL

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

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) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
propane-1,2-diol	Fresh water	260 mg/l

Substance name	Environmental Compartment	Value
	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

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, selfcontained 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

Physical state : liquid

Colour : off-white to yellow-orange

Odour : odourless

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 : 475 °C

Decomposition temperature: No data available

pH : 6 - 8. Concentration: 1 % w/v

Viscosity, dynamic : 76.0 - 427 mPa.s (40 °C)

117 - 541 mPa.s (20 °C)

Viscosity, kinematic : No data available

Water solubility : No data available
Solubility in other solvents : No data available
Partition coefficient: noctanol/water: No data available
Vapour pressure : No data available
Density : 1.1 g/cm^3
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
Miscibility with water : Miscible
Surface tension : 32.0 mN/m, 20 °C

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, male and female): > 2,000 mg/kg Assessment: The substance or mixture has no acute oral toxicity Remarks: Based on data from similar materials
Acute inhalation toxicity :	Acute toxicity estimate: 2.69 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method Acute toxicity estimate: 3.08 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Acute dermal toxicity :	LD50 (Rat, male and female): > 2,000 mg/kg Assessment: The substance or mixture has no acute dermal toxicity Remarks: Based on data from similar materials

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.

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
Remarks: Based on data from similar materials
Components:
azoxystrobin (ISO):
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
Remarks: Based on data from similar materials
Components:
azoxystrobin (ISO):
Species: Rabbit
Result: No eye irritation
C16-18 alcohols, ethoxylated:
Result: Irreversible effects on the eye
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:
Species: Guinea pig
Result: Did not cause sensitisation on laboratory animals.
Remarks: Based on data from similar materials
Components:
azoxystrobin (ISO):
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.

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.
Reproductive toxicity
Components:
azoxystrobin (ISO):
Reproductive toxicity - Assessment: No toxicity to reproduction
Repeated dose toxicity
Components:
azoxystrobin (ISO):
Remarks : No adverse effect has been observed in chronic toxicity tests.
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)): 1.2 mg/l Exposure time: 96 h Remarks: Based on data from similar materials LC50 (*Cyprinus carpio* (Carp)): 2.8 mg/l Exposure time: 96 h Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates:	EC50 (*Daphnia magna* (Water flea)): 0.83 mg/l Exposure time: 48 h Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants:	ErC50 (*Raphidocelis subcapitata* (freshwater green alga)): 2.2 mg/l Exposure time: 72 h Remarks: Based on data from similar materials NOEC (*Raphidocelis subcapitata* (freshwater green alga)): 0.13 mg/l End point: Growth rate Exposure time: 72 h Remarks: Based on data from similar materials

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 (*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*

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.

1,2-benzisothiazol-3(2H)-one:
Biodegradability : Result: rapidly degradable
12.3 Bioaccumulative potential
Components:
azoxystrobin (ISO):
Bioaccumulation : Remarks: Does not bioaccumulate.
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 : Percentage dissipation: 50 % (DT50: 80 d)
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).
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 for local recycling or waste 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

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

14.2 UN proper shipping name
ADN : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (AZOXYSTROBIN)
ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (AZOXYSTROBIN)
RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (AZOXYSTROBIN)
IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (AZOXYSTROBIN)
IATA : Environmentally hazardous substance, liquid, n.o.s. (AZOXYSTROBIN)

14.3 Transport hazard class(es)

ADN	ADR	RID	IMDG	IATA
9	9	9	9	9

14.4 Packing group

ADN	ADR	RID
Packing group : III Classification Code : M6 Hazard Identification Number : 90 Labels : 9	Packing group : III Classification Code : M6 Hazard Identification Number : 90 Labels : 9 Tunnel restriction code : (E)	Packing group : III Classification Code : M6 Hazard Identification Number : 90 Labels : 9
IMDG	**IATA (Passenger)**	**IATA (Cargo)**
Packing group : III Labels : 9 EmS Code : F-A, S-F	Packing instruction (passenger aircraft): 964 Packing instruction (LQ) : Y964 Packing group : III Labels : Miscellaneous	Packing instruction (cargo aircraft): 964 Packing instruction (LQ) : Y964 Packing group : III Labels : Miscellaneous

14.5 Environmental hazards

ADN	ADR	RID
Environmentally hazardous : yes	Environmentally hazardous : yes	Environmentally hazardous : yes
IMDG	**IATA (Passenger)**	**IATA (Cargo)**
Marine pollutant : yes	Environmentally hazardous : yes	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 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, preparations and articles (Annex XVII): Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).: Not applicable

REACH - List of substances subject to authorisation (Annex XIV): 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

Seveso 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

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. Use plant protection products safely. Always read the label and product information before use.

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
IE OEL : Ireland. List of Chemical Agents and Occupational Exposure Limit Values - Schedule 1
IE OEL / OELV - 8 hrs (TWA) : Occupational exposure limit value (8-hour 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; AIIC - Australian Inventory of Industrial Chemicals; 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; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals 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	Calculation method
Aquatic Acute 1 H400	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.