



syngenta®

Reg. No. **L8265** Act No. 36 of 1947 **N-AR 1073** (Namibia) **W130597** (Botswana)

A broad spectrum suspension concentrate fungicide with systemic, translaminar and contact properties for the preventive control of different leaf diseases in crops as listed.

GROUP	11	FUNGICIDE
	M 05	

Active Ingredients:
azoxystrobin (strobilurin)..... 60 g/l
chlorothalonil (phthalimide)..... 600 g/l

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DANGER

Hazard statements:

May cause an allergic skin reaction. Causes serious eye damage. Fatal if inhaled. May cause respiratory irritation. Suspected of causing cancer. Very toxic to aquatic life with long-lasting effects.

Precautionary statements:

Prevention: Avoid breathing mist or vapours. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. **Response:** If inhaled, remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTRE/doctor. If in eyes, rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE/doctor. Collect spillage. **Storage:** P233 Store in a well-ventilated place. Keep container tightly closed.

EMERGENCY TEL NO.:
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UN 3082

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1. WARNINGS:

Hazard statements: May cause an allergic skin reaction. Causes serious eye damage. Fatal if inhaled. May cause respiratory irritation. Suspected of causing cancer. Very toxic to aquatic life with long-lasting effects.

Withholding periods: Minimum number of days between last application and harvest.

BEANS	14 days
BRASSICA	7 days
CARROTS	1 day
CELERY	7 days
CUCURBITS (excluding patty pans).....	3 days
GROUNDNUTS	28 days
MANGE TOUT	14 days
ONIONS (green bunching).....	14 days
ONIONS (dry bulb).....	7 days
PATTY PANS	1 day
PEAS	7 days
PEPPERS (bell/sweet/chilli pepper, paprika, pimento and piquante).....	7 days
POTATOES	7 days
TOMATOES	7 days

NOTE: Compliance with these withholding periods will ensure that residues do not exceed local maximum residue limits (MRL).

- Harmful if inhaled or swallowed.
- Toxic to fish and very toxic to other aquatic organisms.
- Avoid contact with skin or eyes since product may cause eye and skin irritation and skin sensitisation.
- Store in a dry place away from food and feed.
- Keep out of reach of children, uninformed persons and animals.
- **Re-entry:** Do not enter treated area until spray deposit has dried.

Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not warrant that it will be efficacious under all conditions because the action and effect thereof may be affected

by factors such as abnormal soil, climatic and storage conditions, quality of dilution water, compatibility with other substances not indicated on the label and the occurrence of resistance of the disease against the remedy concerned, as well as by the method, time and accuracy of application. The registration holder furthermore does not accept responsibility for damage to crops and vegetation, the environment, or harm to people or animal or for lack of performance of the remedy concerned due to failure of the user to follow the label instructions or to the occurrence of conditions, that could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

2. PRECAUTIONS:

Precautionary statements: **Prevention:** Do not breathe mist or vapours. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. **Response:** If inhaled, remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTRE/doctor. If in eyes, rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE/doctor. Collect spillage. **Storage:** P233 Store in a well-ventilated place. Keep container tightly closed.

- Do not eat, drink, or smoke while handling this product.
- Prevent contamination of food, feed, drinking water and eating utensils.
- Avoid contact with skin or eyes and inhalation of spray mist.
- Wear rubber gloves and a face shield when handling the product. If you get product in your eyes, flush it out at once. If you get it on your skin, wash it off at once. If you spill it on your clothes, change and wash them.
- Invert the empty container over the spray or mixing tank and allow to drain for at least 30 seconds after the flow has slowed down to a drip. Thereafter, rinse the container three (3) times with a volume of water equal to a minimum of 10% of that of the container. Add the rinsate to the contents of the spray tank before destroying the container in the prescribed manner.
- While spraying, avoid contact with the spray as much as possible.

- Avoid spray drift onto other crops, grazing, rivers, or dams.
- Clean applicator thoroughly after use and dispose of cleansing water where it will not contaminate crops, grazing, rivers, or dams.
- Do not use empty container for any other purpose.
- Change and wash your work clothes. Wash yourself.

3. RELEVANT SUBSTANCES:

Chemical name	
chlorothalonil (ISO)	
Classification	Concentration (% w/w)
Acute Tox. 2; H330 Eye Dam. 1; H318 Acute Tox. 2; H330 Eye Dam. 1; H318 Skin Sens. 1; H317 Carc. 2; H351 STOT SE 3; H335 (Respiratory system) Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10	≥ 30 - < 50
Chemical name	
azoxystrobin (ISO)	
Classification	Concentration (% w/w)
Acute Tox. 3; H331 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10	≥ 2,5 - < 10
Chemical name	
1,2-benzisothiazol-3(2H)-one	
Classification	Concentration (% w/w)
Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 2; H411 M-Factor (Acute aquatic toxicity): 1	≥ 0,0025 - < 0,025

4. RESISTANCE MANAGEMENT:

AMISTAR OPTI is classified as a group code 11 and M 05 fungicide. Any fungus population may contain individuals naturally resistant to **AMISTAR OPTI** and other group code 11 and M 05 fungicides. The resistant individuals can eventually dominate the fungus population if these fungicides are used repeatedly and exclusively in programs. These resistant fungi may not be controlled by **AMISTAR OPTI** or

any other group code 11 and M 05 fungicides.

To delay fungicide resistance:

- Avoid exclusive repeated use of fungicides from the same fungicide group code. Alternate with products from different fungicide group codes.
- Refer to individual product labels when alternating products or when using tank mixtures.
- Integrate other control methods (chemical, cultural, biological) into disease control programs.

4.1 General

- **AMISTAR OPTI** should always be applied preventatively as prescribed in the recommendations table.
- **AMISTAR OPTI** must be applied as a full-cover spray.
- Do not reduce the dosage rates below that which are recommended on the label.
- Never use **AMISTAR OPTI** as a corrective or curative treatment or after the unsuccessful application of any product.

For specific information on resistance management contact the registration holder of this product (Syngenta South Africa) or visit the FRAC website at <http://www.frac.info/frac/index.html>.

5. DIRECTIONS FOR USE: Use only as indicated.

5.1 Compatibility

AMISTAR OPTI is not compatible with products containing heavy metals. The compatibility of **AMISTAR OPTI** with other products may be influenced by the formulation of the products involved as well as the quality of the water. Since the formulation of other products may change without the knowledge of Syngenta and the quality of water may vary from farm to farm, a physical compatibility test and small scale testing should always be carried out prior to application.

5.2 Mixing Instructions

- Half-fill the spray tank with clean water.
- Add the required amount of **AMISTAR OPTI** to the spray tank and top-up with water to the required volume while agitating continuously.
- If **AMISTAR OPTI** needs to be used in tank mix combinations, first mix small quantities of the chemicals separately with water.
- Add these mixtures together while agitating and check for any signs of incompatibility e.g., flocculation etc. In this instance, full cognisance must be taken of all WARNINGS, PRECAUTIONS and DIRECTIONS FOR USE on that label.
- Continue agitation throughout application and do not allow the tank mixture to stand still for any period of time.

5.3 Application

Ensure that the applicator to be used is in a good working condition and correctly calibrated. Use the spray volumes as indicated to ensure good coverage. Ensure thorough agitation of the mixture in the tank during mixing and spraying.

Influence of rain on application: Should it rain within two

(2) hours after application, the application must be repeated.

5.3.1 Ground application

AMISTAR OPTI may be applied with conventional high-volume spray equipment. Calibrate the apparatus before application to ensure that the correct dosage is applied. The distribution of the spray volume must be uniform throughout the target area.

5.3.2 Aerial application

Avoid chemical drift at all times.

Aerial application of **AMISTAR OPTI** may only be done by a registered aerial application operator using a correctly calibrated, registered aircraft according to the instructions of SANS 10118 (Aerial Application of Agricultural Remedies). It is important to ensure that the spray mixture is distributed evenly over the target area and that the loss of spray material during application is restricted to a minimum. It is therefore essential that the following criteria are met:

a) Application parameters:

- **Volume:** A volume of 30 - 40 ℓ water/ha is recommended in maize. As **AMISTAR OPTI** has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy or be held responsible for any adverse effects if the product is applied aerially at a lower volume rate than recommended above.
- **Droplet coverage:** Droplet coverage of 25 - 35 droplets per cm² must be recovered at the target.
- **Droplet size:** A droplet spectrum with a VMD of 280 - 300 microns is recommended. Ensure that the production of fine droplets (less than 150 microns - high drift and evaporation potential) is restricted to a minimum.
- **Flying height:** The height of the spray boom should be maintained at 3 - 4 metres above the target. Do not spray when aircraft is in a climb, at the top, or during a dive, or when banking.

b) Equipment:

- Use suitable application equipment (hydraulic nozzles or rotary atomisers) that will produce the desired droplet size and coverage, but which will ensure the minimum loss of product either through endodrift (within target field) or exodrift (outside target field).
- The operator must use a setup that will produce a droplet spectrum with the lowest possible relative span.
- All nozzles/atomisers should be positioned within the inner 60 - 75% of the wingspan to prevent droplets from entering the wingtip vortices.

c) Meteorological conditions:

- The difference in temperature between the wet and dry bulb thermometers, of a whirling hygrometer, should not exceed 8°C.
- Stop spraying if the wind speed exceeds 15 km/h or reduces to less than 5 km/h.
- Aerial application of **AMISTAR OPTI** must not be done under turbulent, unstable conditions during the heat of the day when rising thermals and downdraughts occur. Also note that the application of this product

under temperature inversion conditions (spraying in or above the inversion layer) may lead to the following:

- Reduced efficacy due to suspension and possible evaporation of small droplets in the air (inadequate coverage).
- Damage to other sensitive areas and or non-target crops through the movement of the suspended spray cloud away from the target field.
- Under the following climatic conditions drift could occur more than 3 - 5 km from the nearest spray path of the aircraft:
 - Cloudy weather with relative humidity above 80% and low air movement of less than 5 km per hour. When such conditions prevail, aerial application should **NOT** be carried out where sensitive crops, crop seedlings, or deciduous fruit trees e.g., apples in budding or early development stages are present within 5 km of the nearest spray path of the aircraft.
 - Ensure that the aerial spray operator knows which fields to spray. Supply the precise identification to the operator of the fields to be sprayed preferably by means of a map or GPS coordinates. Indicate to the operator adjacent environmental sensitive areas or sensitive neighbouring crops, beehives, or water sources that could be affected by the pesticide.

Obtain assurance from the aerial spray operator that the above requirements will be met and that relevant data will be compiled in a logbook and kept for future reference.

5.4 Recommendations

For the best results, study the sections under 4 and 5.1 - 5.3 thoroughly.

BEANS

(Broad bean, dry bean, kidney bean, black-eyed pea and lupine, except soybean)

Disease	Dosage
Anthraxnose (<i>Colletotrichum lindemuthianum</i>) Alternaria blight (<i>Alternaria</i> spp.) Alternaria leaf spot (<i>Alternaria alternata</i>) Ascochyta leaf spot (<i>Ascochyta phaseolorum</i>) Ascochyta blight (<i>Mycosphaerella pinodes</i>) Ascochyta leaf and pod spot (<i>Ascochyta</i> spp.) Bean rust (<i>Uromyces appendiculatus</i>) Rust (<i>Phakospora</i> spp.) Web blight (<i>Rhizoctonia solani</i>)	Ground and aerial application 1.8 - 2.8 ℓ/ha
Remarks <ul style="list-style-type: none">• Do not apply more than two (2) foliar applications	

BEANS cont.

- of **AMISTAR OPTI** or other strobilurins (QoI group 11 fungicides) before alternating with a fungicide that has a different mode of action.
- Do not make more than four (4) foliar applications of **AMISTAR OPTI** or other QoI group 11 fungicides per crop per year.
- Apply up to three (3) sprays seven (7) days apart when the weather favours the disease.
- Application should begin prior to disease development and continue throughout the season every seven (7) days.
- Do not apply **AMISTAR OPTI** with wetting agents.
- For use only on beans to be harvested dry with pods removed.

Spray volume

- **Tractor application:** Use at least 200 - 750 ℓ water/ha.

BRASSICA

Disease	Dosage
White blister (<i>Albugo candida</i>)	Ground application 3.125 ℓ/ha
Remarks <ul style="list-style-type: none"> • Apply up to three (3) sprays seven (7) days apart when the weather favours the disease. • Do not make more than three (3) applications of AMISTAR OPTI per season. 	
Spray volume <ul style="list-style-type: none"> • Tractor application: 450 - 700 ℓ water/ha. 	

CARROTS

Disease	Dosage
Early blight <i>(Cercospora carotea)</i> Late blight <i>(Alternaria dauci)</i>	Ground and aerial application 2.8 ℓ/ha
Remarks <ul style="list-style-type: none"> Do not apply more than two (2) foliar applications of AMISTAR OPTI or other strobilurins (Qol Group 11 Fungicides) before alternating with a fungicide that has a different mode of action. Do not make more than six (6) foliar applications of AMISTAR OPTI or other Qol Group 11 fungicides per crop per year. Applications should begin prior to disease development and continue throughout the season every seven (7) days. Do not apply AMISTAR OPTI with wetting agents. 	
Spray volume <ul style="list-style-type: none"> Tractor application: Use at least 200 - 750 ℓ water/ha. 	

CELERY

Disease	Dosage
Early blight <i>(Cercospora apii)</i> Late blight <i>(Septoria apicola)</i> Basal stalk rot <i>(Rhizoctonia solani)</i>	Ground and aerial application 2.8 - 4 l/ha

CELERY cont.

Remarks
<ul style="list-style-type: none">• Do not apply more than two (2) foliar applications of AMISTAR OPTI or other strobilurins (Qol group 11 fungicides) before alternating with a fungicide that has a different mode of action.• Do not make more than six (6) foliar applications of AMISTAR OPTI or other Qol group 11 fungicides per crop per year.• Applications should begin prior to disease development and continue throughout the season every seven (7) days.• Do not apply AMISTAR OPTI with wetting agents.
Spray volume
<ul style="list-style-type: none">• Tractor application: Use at least 200 - 750 ℓ water/ha.

CUCURBITS

(Cucumber, gherkins, melons, watermelon, pumpkin, squash and zucchini, excluding patty pans)

Disease	Dosage
Powdery mildew <i>(Sphaerotheca fuliginea)</i> <i>(Erysiphe cichoracearum)</i> Downy mildew <i>(Pseudoperonospora spp.)</i> Anthracnose <i>(Colletotrichum spp.)</i> Gummy stem blight <i>(Didymella bryoniae)</i> Belly rot <i>(Rhizoctonia solani)</i> Leaf spots <i>(Alternaria spp.)</i> <i>(Cercospora spp.)</i>	Ground application 2.08 ℓ/ha Ground and aerial application 3.7 ℓ/ha
Remarks <ul style="list-style-type: none"> • Apply up to three (3) sprays seven (7) days apart when the weather favours the disease. • Do not apply more than 2 (two) foliar applications of AMISTAR OPTI or other strobilurins (QoI group 11 fungicides) before alternating with a fungicide that has a different mode of action. • Apply in sufficient water volumes to ensure adequate coverage. • Do not apply AMISTAR OPTI with wetting agents. • Do not make more than three (3) applications of AMISTAR OPTI per season. • Note: Spraying mature watermelons may result in sunburn of the upper surface of the fruit. DO NOT apply in the following conditions: Intense heat and sunlight, drought conditions, poor vine canopy, or any environmental conditions that may lead to sunburn. 	
Spray volume <ul style="list-style-type: none"> • Tractor application: Use at least 500 ℓ water/ha. 	

GROUNDNUTS

Disease	Dosage
Leaf spot diseases: Early leaf spot <i>(Cercospora arachidicola)</i> Web blotch <i>(Phoma arachidicola)</i>	Ground application 1.7 ℓ/ha

GROUNDNUTS cont.**Remarks**

- Apply two (2) consecutive sprays at 14-day intervals starting at first signs of disease, or at flower initiation if no disease is present.
- Do not exceed two (2) applications of **AMISTAR OPTI** per season.

Spray volume

- **Tractor application:** 300 - 400 ℓ water/ha

ONIONS

(Green bunching and dry bulb, leek, shallot and garlic)

Disease	Dosage
Downey mildew (<i>Peronospora destructor</i>)	Ground and aerial application 2.8 - 4.0 ℓ/ha
Purple blotch (<i>Alternaria porri</i>)	Ground and aerial application 1.8 - 3.7 ℓ/ha

Remarks

- Do not apply more than two (2) foliar applications of **AMISTAR OPTI** or other strobilurins (Qol group 11 fungicides) before alternating with a fungicide that has a different mode of action.
- Do not make more than three (3) foliar applications of **AMISTAR OPTI** or other Qol group 11 fungicides per crop per year.
- Applications should begin prior to disease development and continue throughout the season every seven (7) days following the resistance management guidelines.
- For downey mildew control, use a 5 - 7-day spray interval.
- Use sufficient water to obtain thorough coverage of tops.
- Do not apply **AMISTAR OPTI** with wetting agents.

Spray volume

- **Tractor application:** Use at least 200 - 750 ℓ water/ha.

PEAS AND MANGE TOUT

Disease	Dosage
Ascochyta blight (<i>Ascochyta</i> spp.)	Ground application 2,5 ℓ/ha

Remarks

- Apply in a spray program every 10 - 14 days from early flowering or at the first signs of disease.
- Do not apply **AMISTAR OPTI** later than the end of flowering.
- Do not exceed two (2) applications of **AMISTAR OPTI** per season.

Spray volume

- **Tractor application:** 500 - 1 000 ℓ water/ha.

PEPPERS

(Bell/sweet/chilli pepper, paprika, pimento and piquante)

Disease	Dosage
Powdery mildew (<i>Leveillula taurica</i>)	Ground application 250 ml/100 ℓ water

Remarks

- Apply three (3) consecutive sprays seven (7) days apart starting at flower initiation.

PEPPERS cont.

- Applications can be repeated at 14-day intervals, depending on the disease pressure and spray program being used. If a 14-day interval is used, ensure that an alternate product is used after seven (7) days, particularly if weather conditions are conducive to disease development.
- Apply in sufficient water volumes to ensure adequate coverage.
- Do not make more than three (3) applications of **AMISTAR OPTI** per season.

Spray volume

- **Tractor application:** Use at least 500 ℓ water/ha.

POTATOES

Disease	Dosage
Early blight (<i>Alternaria solani</i>)	Ground and aerial application 1.25 ℓ/ha
Powdery mildew (<i>Erysiphe</i> spp.)	Ground and aerial application 1.9 ℓ/ha

Remarks

- Apply in blocks of two (2) consecutive sprays 7 - 10-days apart when the weather favours the disease.
- Alternatively, applications can be repeated at 14-day intervals, provided that these applications are alternated every seven (7) days with other products registered for early blight control.
- **AMISTAR OPTI** alternated with BRAVO 720 in a 7-day cycle will also control late blight (*Phytophthora infestans*) preventatively.
- Due to reduced efficacy, aerial application is only recommended when prevailing conditions preclude application by tractor.
- Do not exceed six (6) applications per season of **AMISTAR OPTI** or products containing azoxystrobin.

Spray volume

- **Tractor application:** 250 - 750 ℓ water/ha.
- **Aerial application:** 30 - 40 ℓ water/ha.

TOMATOES

Disease	Dosage
Early blight (<i>Alternaria solani</i>)	Ground application 330 ml/100 ℓ water maximum of 2.28 ℓ/ha (refer to spray volume for detail)
Powdery mildew (<i>Oidiopsis sicula</i>)	Ground and aerial application 1.9 ℓ/ha

Remarks

- Apply in blocks of two (2) consecutive sprays 7 - 10 days apart when the weather favours the disease.
- Alternatively, applications can be repeated at 14-day intervals, provided that these applications are alternated every seven (7) days with other products registered for early blight control.
- **AMISTAR OPTI** alternated with BRAVO 720 in a 7-day cycle will also control late blight (*Phytophthora infestans*) preventatively.
- Do not exceed six (6) applications per season of **AMISTAR OPTI** or products containing azoxystrobin.

TOMATOES cont.

Spray volume

- **Tractor application:** 500 - 1 400 ℓ water/ha.
For 500 - 690 ℓ water/ha use the 330 ml/100 ℓ water dosage.
For 700 - 1 400 ℓ water/ha use the 2.28 ℓ/ha dosage.
Do not exceed 2.28 ℓ **AMISTAR OPTI**/ha.

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