

Miravis[®] Duo

syngenta.

Reg. No. **L10750**

Act No. 36 of 1947

N-AR 2184 (Namibia)

A suspension concentrate systemic fungicide for the preventative control of diseases in crops as indicated.

GROUP **3** **FUNGICIDE**
7

Active Ingredients:
ADEPIDYN[™] (pydiflumetofen).... 75 g/l
difenoconazole (triazole)..... 125 g/l

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WARNING

Hazard statements:

Harmful if swallowed. Suspected of causing cancer. Suspected of damaging fertility. Very toxic to aquatic life with long-lasting effects.

Precautionary statements:

Prevention: Obtain special instructions before use. Wash skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. **Response:** If exposed or concerned, get medical advice/attention. Collect spillage. **Storage:** Store locked-up. **Disposal:** Dispose of contents/container to an approved waste disposal plant.

EMERGENCY TEL NO.:
+27 82 446 8946 (Griffon)

UN 3082

Registration holder
Syngenta South Africa (Pty) Ltd
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1. WARNINGS:

Hazard statements: Harmful if swallowed. Suspected of causing cancer. Suspected of damaging fertility. Very toxic to aquatic life with long-lasting effects.

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

PEPPERS (Capsicum group).....	1 day
POTATOES	14 days
TOMATOES	1 day

NOTE: Compliance with these withholding periods will ensure that residues do not exceed local maximum residue limits (MRL), but the import tolerances of other countries might possibly be exceeded. If the crop to be treated is intended for export, consult the relevant importer or exporting body regarding the use of this product, MRL's and recommended withholding periods.

- Read safety directions before opening or using.
- To avoid risk to man and environment, comply with the instructions for use.
- May be harmful when inhaled or swallowed.
- Irritating or harmful to eyes and skin.
- Toxic to fish and other aquatic organisms with long lasting effects. Avoid contact with aquatic environments.
- Keep out of reach of children, uninformed persons and animals.
- Store in a cool dry place away from food and feed.
- Do not eat, drink, or smoke while handling this product.
- Prevent contamination of food, feed, drinking water and eating utensils.
- **Aerial application:** Notify all inhabitants in the immediate vicinity of the area to be sprayed and issue the necessary warnings.
- Do not spray over, or allow drift to contaminate adjacent areas or water.
- **Re-entry:** Do not enter treated area until spray deposit has dried unless wearing protective clothing.

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 weed 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, vegetation and the environment, or harm to people or animals 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:** Obtain special instructions before use. Wash skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. **Response:** If exposed or concerned, get medical advice/attention. Collect spillage. **Storage:** Store locked-up. **Disposal:** Dispose of contents/container to an approved waste disposal plant.

- Keep out of reach of children and inexperienced persons.
- Do not transport or store with food.
- Avoid contact with eyes and skin.
- DO NOT inhale spray mist.
- While spraying, avoid contact with the spray as much as you can.
- Avoid spray drift onto other crops, grazing rivers, or dams.
- Clean applicator thoroughly after use and dispose of wash water where it will not contaminate crops, grazing, rivers or dams.
- If clothing becomes contaminated with product or wet with spray, remove clothing immediately, change and wash them. Wash yourself.
- Workers should use protective clothing. When preparing spray and using the prepared spray,

wear: Cotton overalls buttoned to the neck and wrist, a washable hat, elbow-length PVC gloves, goggles and a disposable mist mask covering mouth and nose.

- After use and before eating, drinking, or smoking wash hands, arms and face thoroughly with soap and water. Wash gloves, goggles and contaminated clothing after each day.
- Store in the closed, original container in a cool, well-ventilated area. Avoid temperatures below 0°C and above 35°C.
- 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.
- Do not use empty container for any other purpose.

First Aid and Medical Treatment

If poisoning occurs contact a doctor or the **Tygerberg Poison Information Centre** at +27 861 555 777 or **Griffon Poison Centre** at +27 82 446 8946.

In case of intoxication, have the product container and label with you when calling a poison control centre, doctor, or when going for treatment.

Note to doctor: There is no specific antidote available. Treat symptomatically and do not induce vomiting, the product contains petroleum distillates and/or aromatic solvents.

- **Ingestion:** Call a poison control centre or doctor immediately for treatment advice. Do NOT induce vomiting. Do not give anything by mouth to an unconscious person.
- **Skin contact:** Remove contaminated clothing immediately. Immediately wash skin with soap and rinse skin with plenty of water for 15 - 20 minutes. Call a poison control centre or doctor for treatment advice. Wash contaminated clothing before re-use.
- **Inhalation:** Move person to fresh air. If person is not breathing, call an ambulance, then give artificial respiration, preferably mouth to mouth, if possible. Keep patient warm and at ease. Call a poison control centre or doctor for further treatment advice.
- **Eye contact:** Hold eye open and rinse slowly and gently with plenty of water for 15 - 20 minutes in and under the eyelids. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for immediate treatment advice.

3. RELEVANT SUBSTANCES:

Chemical name	
difenoconazole	
Classification	Concentration (% w/w)
Acute Tox. 4; H302 Eye Irrit. 2; H319 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	
M-Factor (Acute aquatic toxicity): 10	

difenoconazole cont.	
Classification	Concentration (% w/w)
M-Factor (Chronic aquatic toxicity): 10	≥ 10 - < 20
Chemical name	
pydiflumetofen	
Classification	Concentration (% w/w)
Carc. 2; H351 Repr. 2; H361f Aquatic Acute 1; Aquatic Chronic 1; H410	≥ 3 - < 10
M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	

4. RESISTANCE MANAGEMENT:

MIRAVIS DUO is classified as a group code 7 and 3 fungicide. Any fungus population may contain individuals naturally resistant to **MIRAVIS DUO** and other group code 7 and 3 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 **MIRAVIS DUO** or any other group code 7 and 3 fungicides. As the product owner cannot foresee the development of resistance, the company assumes no liability for any damage or loss resulting from the lack of activity of **MIRAVIS DUO** against these possible resistant strains.

To delay fungicide resistance:

- Avoid exclusive repeated use of fungicides from the same fungicide group code. Alternate or tank mix 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.

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.

Thorough, uniform coverage is essential for effective disease control.

5.1 General

MIRAVIS DUO is a systemic fungicide for the preventative control of foliar diseases in various crops. It combines the action of a new active substance ADEPIDYN™ (Pydiflumetofen), from the chemical group of carboxamides, with difenoconazole, from the chemical group of triazoles. The mixture of both active ingredients determines a combined action, blocking the respiratory process and ergosterol synthesis of fungi. These qualities ensure a broad spectrum of

control, reducing the risk of emergence of resistant strains.

ADEPIDYN™ (Pydiflumetofen) is a broad-spectrum fungicide belonging to chemical group 7; inhibitors of succinate dehydrogenase or SDHI (FRAC). This inhibits Complex II of respiration where SDHI acts. It does not possess cross-resistance with triazoles or strobilurines, for which the mixture with these chemicals is recommended for a better handling of resistance. It has prolonged residual effect, ensuring the protection of the leaves, delaying the senescence and keeping them green for a longer time, managing to express the maximum potential of the crop.

Difenoconazole is a preventative fungicide belonging to chemical group 3; inhibitors of membrane sterol biosynthesis (DMI) (FRAC). It significantly inhibits the subcuticular development of the mycelium of the fungi and prevents the development of the symptoms of the diseases. It has local systemic properties and translaminar capacity.

MIRAVIS DUO degrades quickly in the environment, ensuring that there are no negative effects on germination and the establishment of successive crops in rotation.

5.2 Compatibility

If **MIRAVIS DUO** is used in tank mix combinations, mix small quantities of the chemicals with water to test the physical compatibility of the components. The products should be added separately to the bulk water in the spray tank. Add these 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.

MIRAVIS DUO is compatible with various fungicides and insecticides with which it can be tank mixed or alternated with, at registered label rates, in a season-long disease control program. Follow guidance on compatibility of each crop in the recommendations section (section 6).

5.3 Mixing Instructions

MIRAVIS DUO is a concentrated suspension which must be diluted in water. For proper preparation, observe the following instructions. Verify proper functioning and correct calibration of the equipment before starting the application.

- Half-fill the spray tank with clean water, shake the **MIRAVIS DUO** container thoroughly immediately before use.
- Add the required volume of **MIRAVIS DUO** to the spray tank.
- Replace cap after pouring.
- If tank mixtures are made, add the products to the tank in the following sequence (as applicable): Buffers, water dispersible granule or bag, wettable powder, suspension concentrate (**MIRAVIS DUO** and other suspension concentrates), emulsifiable concentrate, soluble liquid formulations then adjuvants.
- Fill the spray tank with water to the required level while maintaining agitation to ensure thorough mixing of the spray mixture before spraying commences.
- Maintain agitation while spraying.

- Prepared spray mixture must not be left in the spray tank for more than six (6) hours, as effectiveness may be reduced due to degradation of the product.

5.4 General Directions

It is recommended that **MIRAVIS DUO** be applied preventatively only for the control of diseases on all crops.

5.4.1 Ground application

MIRAVIS DUO must be applied as a full-cover preventative spray for the control of the diseases mentioned. When applying **MIRAVIS DUO**, ensure good coverage of the leaves of the crop to be protected. Check that the spray equipment is in good working condition and that the bar is adjusted to a height to ensure complete coverage. Ensure good coverage of the whole plant (the stems and both surfaces of the leaves) by using enough water and spraying equipment that is capable of maintaining high pressure. Avoid evaporation and drift.

6. RECOMMENDATIONS: Use only as recommended.

PEPPERS

(Field and cover crops of pepper, paprika, chillies, okra, pepino and eggplant)

Disease	Dosage
Powdery mildew (<i>Leveillula taurica</i>)	Ground application 70 - 100 mℓ/100 ℓ water (Min 700 mℓ/ha; max 1 000 mℓ/ha)
Remarks <ul style="list-style-type: none">• Always apply as a preventative spray application when weather conditions favour disease development.• Repeat at 7-day intervals. Use the higher rate in high disease pressure conditions and environments.• Do not apply more than four (4) applications during the crop season.• For programs in which tank mixes are used, the number of MIRAVIS DUO containing applications should not be more than 50% of the total number of fungicide applications per season.• For use in mixtures, apply two (2) consecutive applications per block before alternating with fungicides with a different mode of action.• Alternate MIRAVIS DUO spray applications with fungicides with a different mode of action.	
Spray volume <ul style="list-style-type: none">• Ground application: 200 - 2 000 ℓ water/ha	

POTATOES

Disease	Dosage
Early blight (<i>Alternaria solani</i>)	Ground application 500 - 1 000 mℓ/ha plus COMPLEMENT® SUPER
Remarks <ul style="list-style-type: none">• Apply as a preventative spray application when weather conditions favour disease development at 7 - 10-day intervals.• Use the shorter interval when disease pressure is high.• Do not apply more than four (4) applications during the	

POTATOES cont.

crop season.

- For programs in which tank mixes are used, the number of **MIRAVIS DUO** containing applications should not be more than 50% of the total number of fungicide applications per crop season.
- For use in mixtures, apply a maximum of two (2) consecutive applications per block before alternating with fungicides with a different mode of action.
- Apply with sufficient water volume to ensure complete coverage.
- **MIRAVIS DUO** is compatible with various insecticides and fungicides at registered label rates (see COMPATIBILITY) and can be tank mixed or alternated with, at registered label rates, in a season-long disease control program as follows: APHOX® (L3428), COMPLEMENT® SUPER (L8169), RIDOMIL GOLD® FLO (L6669) and SELECRON® 500 EC (L3113).

Spray volume

- **Ground application:** 200 - 700 ℓ water/ha

TOMATOES

Disease	Dosage
Early blight (<i>Alternaria solani</i>) Powdery mildew (<i>Leveillula taurica</i>) (<i>Oidium neolycopersici</i>)	Ground application 70 - 100 ml/100 ℓ water (Min 700 ml/ha; max 1 000 ml/ha)
Remarks <ul style="list-style-type: none">• Always apply as a preventative spray application when weather conditions favour disease development.• Repeat at 7-day intervals. Use the higher rate in high disease pressure conditions and environments.• Do not apply more than four (4) applications during the crop season.• For programs in which tank mixes are used, the number of MIRAVIS DUO containing applications should not be more than 50% of the total number of fungicide applications per season.• For use in mixtures, apply two (2) consecutive applications per block before alternating with fungicides with a different mode of action.• Alternate MIRAVIS DUO spray applications with fungicides with a different mode of action.	
Spray volume <ul style="list-style-type: none">• Ground application: 200 - 2 000 ℓ water/ha	

MIRAVIS®, **ADEPIDYN™**, **APHOX®** (L3428), **COMPLEMENT® SUPER** (L8169), **RIDOMIL GOLD® FLO** (L6669) and **SELECRON® 500EC** (L3113) are registered trademarks of a Syngenta Group Company.

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