

WARNINGS

- Causes serious eye irritation.

PRE-HARVEST INTERVAL: Allow the following number of days between last application and harvest:

Citrus	28 days
Table and Wine Grapes	28 days
Potatoes	21 days
Avocado	30 days
Macadamia	28 days

RE-ENTRY INTERVAL: : Do not enter treated area, until spray deposit has dried unless wearing protective clothing.

DISCLAIMER

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 climatic and storage conditions, quality of dilution water, compatibility with other substances not indicated on the label as well as by the method, time, and accuracy of application. The registration holder furthermore does not accept responsibility for damage to crops, vegetation, the environment or harm to man 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 which could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

PRECAUTIONS

- If medical advice is needed, have product container or label at hand.
- Wear protective clothing.
- Wash hands and face thoroughly after handling.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Get medical help if eye irritation persists.
- Rinse empty container three-times with a volume of water equal to a minimum of 30 % of that of the container and add rinsings to the contents of the spray tank before disposing of the container. Destroy the empty container by perforation and dispose of it in a safe manner. Do not use for any other purpose. The triple-rinsed container may be sent to an approved recycling facility for processing.

PACKAGING DISPOSAL: Invert the empty container over the spray or mixing tank and drain for at least 30 seconds after the flow has slowed down to dripping. Thereafter rinse the empty container three times in succession with one quarter of the container volume fresh water and decant the rinsate into the spray or mixing tank. Puncture the triple rinsed container and dispose of via an approved collector or recycles (www.croplife.co.za). Do not bury, burn or donate the container to any other parties that may use it as a container for food or beverages.

HYGROPHOS 400

For full particulars see enclosed leaflet/ Vir volle besonderhede lees ingeslote pamflet

Reg. No. /Nr. L7949, Act No. / Wet Nr 36 of/ van 1947



**READ THE LABEL AND ATTACHED PACKAGED LEAFLET BEFORE USE
KEEP OUT OF REACH OF CHILDREN AND ANIMALS**

FUNGICIDE GROUP CODE

P07

SWAMDODERGROEPKODE

A liquid systemic water soluble fungicide for the control of late blight, downey mildew and *Phytophthora* root and crown rot in various crops as listed on the label.

ACTIVE INGREDIENT: Potassium phosphite
Phosphorus acid-equivalent

586 g/L (435 g/kg)
400 g/L (300 g/kg)



Hazard Statements:

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Precautionary Statements:

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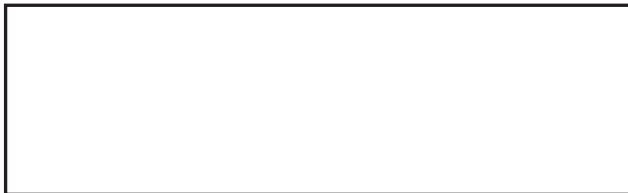
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IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do.

Continue rinsing.

Get medical help if eye irritation persists.



Poison Information Helpline (24 hrs): 0861 555 777

Registered and distributed by: / Geregistreer en versprei deur:

HYGROTECH
SUSTAINABLE SOLUTIONS

PROPERTIES (PTY) LTD/ EDMS BPK | Reg. No. 1984/00638/07
1 Gerard Braak Street, Pyramid, 0120 | PO Box 17220, Pretoria North, 0116, South Africa
Tel: (012) 545 8000 • Fax: (012) 545 8088 • Emergency No. / Noodnr: 082 446 8946



RELEVANT SUBSTANCES

Hazardous Component - Chemical Name	CASNO.	Weight(%)	GHS Classification
Potassium phosphite	139TT-65-6	30-60%	Serious Eye Damage/Irritation Category 2

FIRST AID

Get medical help if eye irritation persists.

IF IN EYES: IMMEDIATELY rinse/flush the eyes gently with running water for at least 15 minutes keeping the eyelids apart. Cold water must be used. Check for and remove contact lenses if easy to do so. Continue with the rinsing. Prevent rubbing of the eyes.

RESISTANCE WARNING

For resistance management, **HYGROPHOS 400** is a group code P07 fungicide. Any fungus population may contain individuals naturally resistant to **HYGROPHOS 400** and other group code P07 fungicides. The resistant individuals can eventually dominate the fungus population if these fungicides are used repeatedly. These resistant fungi may not be controlled by **HYGROPHOS 400** or any other group code P07 fungicides.

To delay fungicide resistance:

Avoid exclusive repeated use of fungicides from the same fungicide group code. Alternate or tank mix with registered products from different fungicide group codes.

Integrate other control methods (chemical, cultural, biological) into disease control programmes. For specific information on resistance management contact the registration holder of this product.

MODE OF ACTION:

Host plan defence induction:

HYGROPHOS 400 is a liquid systemic water-soluble fungicide for the control of late blight, downy mildew and Phytophthora root and crown rot in various crops as listed in the label.

DIRECTIONS FOR USE: USE ONLY AS DIRECTED

COMPATIBILITY / USE RESTRICTIONS:

HYGROPHOS 400 spray application is compatible with many other agricultural pesticides and foliar feed products. Spray tank mixes with Megafol, mineral oils, dimethoate, the dichlorvos group of products, copper-containing products, high calcium-containing products, heavy metal products, oxidising products or highly alkaline products are however not recommended. It is important in the case of citrus that **HYGROPHOS 400** be applied as an ultra-light cover spray. Pesticides and foliar feeds requiring application as high-volume sprays should therefore be regarded as being incompatible with **HYGROPHOS 400** in practical terms.

Consult the supplier or registration holder for further details on compatibility with other agricultural pesticides.

IMPORTANT

- Vines should not be treated with **HYGROPHOS 400** when suffering from heat or drought stress as such conditions, even when temporary, may lead to a phytotoxic response (e.g., leaf and fruit scorch, leaf drop and gummosis).
- **HYGROPHOS 400** should not be applied at temperatures higher than 32 °C and not under low humidity conditions or if the vines are under drought stress.
- **HYGROPHOS 400** must be applied to actively growing vines with high turgidity.
- Do not apply **HYGROPHOS 400** within 7 days (before or after) of a copper application.
- Although **HYGROPHOS 400** is neutralized it may still be corrosive to metal. Use plastic or glass fibre containers when applying as trunk paints.

MIXING

- Preparation of the **HYGROPHOS 400** spray solution is best achieved by filling the spray tank to approximately 50% of capacity with clean water, start agitation, add the required amount of **HYGROPHOS 400** to the water.
- **HYGROPHOS 400** will immediately go into solution. It is however necessary to make sure that the **HYGROPHOS 400** is completely dissolved before additional (compatible) substances are added.
- Follow the manufacturer's mixing instructions for such substances. With the agitation engaged, complete the filling of the spray tank with water.
- Stickers or wetters, if used, should be added last to the spray tank solution.

RECOMMENDATIONS FOR CONTROL OF PHYTOPHTHORA ROOT AND CROWN ROT IN CITRUS

Dosage: 500 ml HYGROPHOS 400 / 100 L water (use 1 800 to 2 000 L of spray solution/ha)

General Recommendations:

- Foliar spray or stem paint treatments should commence after the start of the rain season and repeat applications with 6-to-8-week intervals, during the rainy season.
- To facilitate systemic translocation of **HYGROPHOS 400** to roots of citrus trees, avoid treating when trees are flushing strongly. Under such conditions it will be preferable to delay the application until the new flush begins to harden off.

Foliar Application:

- Apply sprays as ultra-light cover sprays using 1 800 to 2 000 L spray solution/ha for medium and large trees.
- Use proportionally less for smaller trees. Higher spray volumes may give impair effectiveness due to excessive run off and may cause damage to leaves and fruit. Spraying with knapsacks is generally preferred for smaller trees since growers will experience difficulties calibrating mist blowers to deliver lower volumes per hectare.
- Sprays should be applied to trees at high turgidity to avoid leaf burn. For this reason, spraying should be confined to early morning or late afternoon. As a general guide, it is advisable that spraying operations be stopped at approximately one hour before air temperatures are expected to reach 30 °C.
- Do not apply soon after irrigation or heavy rains (see comment under directions for use).

Stem Application:

- For trunk treatment dilute **HYGROPHOS 400** with an equal volume of water.
- Apply by painting the whole trunk from ground level upwards for about 35 cm.
- Where graft incompatibility occurs, apply by painting the scion and lower scaffold branches only.
- Certain scion / rootstock combinations may be sensitive. Confirmation of tolerance of the specific scion / rootstock combination is therefore recommended.

RECOMMENDATIONS FOR DOWNY MILDEW CONTROL IN TABLE AND WINE GRAPES

Dosage: 300 ml HYGROPHOS 400 + 120 g Mancozeb 800 WP”/ 100 L water

- Apply when shoots are 10-15 cm in length and repeat at 10-14-day intervals depending on the frequency and duration of infection periods.
- Spray intervals may need to be reduced to 7-day intervals when weather conditions are very favourable for disease development.
- Under extreme conditions during blossom period and where inclement weather conditions have caused serious disruption of the spray programme, spray intervals should be reduced to 5-day intervals for 2-3 sprays, reverting to 10-14-day spray intervals as conditions improve.

Important Note: After rain or heavy dew, let leaves dry off before application. Repeat application if rainfall is heavier than 10 mm within an hour of application.

Sprays should be applied as normal high-volume sprays to provide good coverage of both the leaves as well as of the developing grape bunches. Over-wetting of vines should be avoided as this may result in run-off and loss of the active ingredient. Spray volumes should therefore conform to the guidelines of the ARC - Fruit, Vine and Wine Research Institute as indicated below:

GROWTH STAGE	VOLUME OF SPRAY SOLUTION REQUIRED PER HECTARE	
	TABLE GRAPES	WINE GRAPES
Shoot length 2.5 to 25 cm	500 - 750 L	250 - 500 L
25 cm shoot length to pre-flowering	750 - 1 000 L	500 - 750L
Flowering to pea-size berries	1 000 - 1 200 L	750 -1 000 L
Pea-size berries to harvest	1 200 - 1 500 L	1 000 -1 200 L

Bush vines, due to the greater density of their canopies, would require similar spray volumes to table grapes.

- Spray should continue until berries reach pea-size. Under abnormally high disease pressure when foliage needs to be protected after berries reach pea-size, continued spraying with **HYGROPHOS 400** and ***Mancozeb 800 WP** mixture may lead to visible spray deposits on berries because of the **Mancozeb 800 WP** component in the mixture. Under such conditions continued spraying with **HYGROPHOS 400** on its own using 300 ml/100 L water will provide useful protection of the leaf canopy without leaving visible spray residues. Remember to uphold withholding period of 28 days before harvest.

RECOMMENDATIONS FOR CONTROL OF LATE BLIGHT ON POTATOES

Dosage: 400 ml HYGROPHOS 400 + 100 ml Chlorothalonil (500 g/L) / 100 L water**

- Apply **Hygrophos 400** in combination with **Chlorothalonil (500 g/L)** but ensure to add the **HYGROPHOS 400** to the spray water and when filling the spray tank while agitating, add the **Chlorothalonil (500 g/L)**.
- Spraying should start in areas and seasons of high risk at 21 days from emergence or sooner when conditions for infection are favourable. Some districts have late blight warning systems that could be helpful. Early sprays at 14 and 21 days from emergence are best applied as directed sprays over the row.
- Repeat sprays at weekly intervals under conditions of high disease pressure. It is however important to maintain good disease control in the early season. Therefore, if late blight threatens to gain a foothold due to a break in the spray programme, or for any other reason, the spray interval should be shortened to 5 days. The target required is that plants should be 95% blight free (or better) at all times.
- Sprays should be applied as conventional high-volume sprays ensuring good coverage of the leaves and stems of the haulms. Spray volumes of 500 - 600 L/ha are intended at first cover spray, increasing to 1000 L at full canopy. Canopies that are over fertilised may be excessively dense and may require even higher spray volumes.
- Lower spray volumes can be used provided the per hectare spray rate of fungicide is maintained. It is intended that the **HYGROPHOS 400** dosage per hectare should be 2.0 - 2.5 L at first cover increasing to 4.0 - 4.5 L/ha at full canopy. The **Chlorothalonil (500 g/L)** dosage per hectare would be 25% of that of the **HYGROPHOS 400** dosage. Growers should note that the lower the spray volume the more critically important the factors of droplet size, distribution, and penetration become. Correct and appropriate calibration of the low volume sprayer is therefore required. Failures have occurred where this was not the case.
- At present the **HYGROPHOS 400 / Chlorothalonil (500 g/L)** treatment is recommended as a programme of weekly sprays. Limited data is currently available on the introduction of other products into the programme. Such introductions could be either synergistic or even antagonistic. The introduction of other products for late blight control into the programme is therefore not currently recommended.

RECOMMENDATION FOR THE PHYTOPHTHORA ROOT ROT ON AVOCADO

Foliar application:

Dosage: 500 ml HYGROPHOS 400/100 L water

- Foliar spray should commence after the start of the rain season (September/October) and repeat applications with 6-to-8-week intervals. Apply until February during the rainy season. DO NOT exceed 3 applications during the season.
- Apply sprays as ultra-light cover sprays using 1 800 to 2 000 L spray solution/ha for medium and large trees.
- Use proportionally less for smaller trees. Higher spray volumes may impair effectiveness due to excessive

- runoff, and may cause damage to leaves and fruit. Spraying with knapsacks is generally preferred for smaller trees since growers will experience difficulties calibrating mist blowers to deliver lower volumes per hectare.
- Sprays should be applied to trees at high turgidity to avoid leaf burn. For this reason, spraying should be confined to early morning or late afternoon. As a general guide, it is advisable that spraying operations be stopped at approximately one hour before air temperatures are expected to reach 30 °C.
 - Do not apply soon after irrigation or heavy rains (see comment under directions for use).

Stem application:

- For trunk treatment dilute **HYGROPHOS 400** with an equal volume of water.
- Stem application should commence after the start of the rain season (September/October) and repeat applications with 6-to-8-week intervals. Apply until February during the rainy season. DO NOT exceed 3 applications during the season.
- Apply by painting the whole trunk from ground level upwards for about 35 cm.
- Any loose bark should be removed before application.
- Where graft incompatibility occurs, apply by painting the scion and lower scaffold branches only.
- Certain scion / rootstock combinations may be sensitive. Confirmation of tolerance of the specific scion / rootstock combination is therefore recommended.

RECOMMENDATION FOR THE PHYTOPHTHORA ROOT ROT ON MACADAMIA

Foliar application:

Dosage: 500 ml HYGROPHOS 400/100 L water

- Foliar spray should commence after the start of the rain season (September/October) and repeat applications with 6-to-8-week intervals. Apply until February during the rainy season.
DO NOT exceed 3 applications during the season.
- Apply sprays as ultra-light cover sprays using 1 800 to 2 000 L spray solution/ha for medium and large trees.
- Use proportionally less for smaller trees. Higher spray volumes may impair effectiveness due to excessive runoff and may cause damage to leaves and fruit. Spraying with knapsacks is generally preferred for smaller trees since growers will experience difficulties calibrating mist blowers to deliver lower volumes per hectare.
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- For trunk treatment dilute **HYGROPHOS 400** with an equal volume of water.
- Stem application should commence after the start of the rain season (September/October) and repeat applications with 6-to-8-week intervals. Apply until February during the rainy season. DO NOT exceed 3 applications during the season.
- DO NOT use stem paint application rates for spray application.
- Apply by painting the whole trunk from ground level upwards for about 35 cm.
- Any loose bark should be removed before application.

- Where graft incompatibility occurs, apply by painting the scion and lower scaffold branches only.
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The addition of a sticker (e.g., *Nu-Film P® or *Adhere®) to the **HYGROPHOS 400 / Mancozeb 800 WP** spray mixture will improve coverage of the fruit and foliage as well as efficacy. Always apply *Nu-Film P® or *Adhere® last to the spray tank, after pre-mixing separately first.

* Nu-Film P® (Reg. No. L2980 Act 36 of 1947)

* Adhere® (Reg. No. L8278 Act 36 of 1947)

** **Chlorothalonil (500 g/L)** is an active ingredient of numerous registered fungicide products.

*** **Mancozeb 800 WP** is an active ingredient of numerous registered fungicide products.



HYGROPHOS 400

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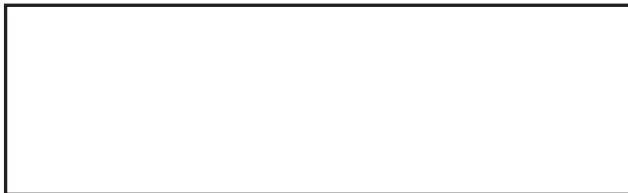
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