



The miracles of science™

TANOS® PRO

Reg. No. L8456 Act No. 36 of 1947

Reg. Nr L8456 Wet Nr 36 van 1947

A water dispersible granule contact and local systemic fungicide with preventive and curative action for the control of Late Blight (*Phytophthora infestans*) and Early Blight (*Alternaria solani*) on potatoes and Downy Mildew (*Plasmopara viticola*) in table and wine grapes.

’n Water disperseerbare korrel kontak- en lokaalsistemiese swamdoder met beskermende en kuratiewe werking vir die beheer van Laatroes (*Phytophthora infestans*) en Vroeë roes (*Alternaria solani*) op aartappels en Donsige Skimmel (*Plasmopara viticola*) op tafelen wyndruiwe.

FUNGICIDE GROUP CODE	27 / 11 / M4	SWAMDODER GROEP KODE
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ACTIVE INGREDIENT

Cymoxanil (ethyl urea) 80 g/kg....
 Famoxadone (oxazolidinedione) 40 g/kg.....
 Folpet (phthalimide) ...333 g/kg....

AKTIEWE BESTANDDEEL

Simoksaniil (etielurea)
 Famoksadoon (oksasolidiendioon)
 Folpet (ptalimied)

Net Mass

3 kg

Netto Massa

**REGISTERED BY /
GEREGISTREER DEUR:**

DUPONT DE NEMOURS SOUTH AFRICA (PTY)
 LTD
 Co. Reg. No. 2009/014079/07
 P O BOX / POSBUS 3332
 HALFWAY HOUSE 1685
 Tel: (011) 218-8600

**24 HOUR/UUR EMERGENCY
 NUMBER/ NOODNOMMER:
 083 123 3911**

BATCH NUMBER
 DATE MANUFACTURED

LOTNOMMER
 DATUM VERVAARDIG

UN No. / VN Nr. 3077

**CAUTION
VERSIGTIG**

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TANOS[®] PRO

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Contains cymoxanil, famoxadone and folpet

WARNINGS

- WITHHOLDING PERIODS: ALLOW THE FOLLOWING MINIMUM NUMBER OF DAYS BETWEEN LAST APPLICATION AND HARVEST.

Potatoes - 7 days

Grapes (table) - do not apply after berries have reached pea size

Grapes (wine) - 28 days

Grapes and grape products e.g. wine, grape juice and raisins for export:

The local MRL level of TANOS[®] PRO may not be applicable in all countries whereto RSA grapes and grape products are exported. DuPont can therefore not be held liable if the import tolerance of other countries is exceeded. Consult relevant export organizations or the supplier in case of uncertainty.

- Handle with care.
- Harmful if inhaled or swallowed.
- Toxic to fish.
- Store away from food and feed. Store in original container, tightly closed, in a secure and well-ventilated room.
- Protect against humid air and water.
- Re-entry: Do not enter treated area until spray deposit has dried unless wearing protective clothing.
- Keep out of reach of children, uninformed persons and animals.
- Do not use on hydroponically grown crops or on any container-grown crops.
- **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 water or adjacent areas.

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 and the occurrence of resistance of the disease against the remedy concerned as well as by the method, time and accuracy of the 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

- Avoid inhalation of dust or spray mist.
- Avoid contact with skin, eyes and clothing.
- Wash with soap and water after use and accidental skin contact.
- Do not eat, drink or smoke whilst applying and mixing or before washing hands and face and change of clothing.
- Prevent drift of spray mist onto other crops, grazing, adjacent water sources and areas not under treatment.

- Do not contaminate streams, rivers or dams.
- Immediately after application, completely drain the spray equipment.
- Thoroughly rinse the sprayer and flush the hoses, boom and nozzles with clean water. Loosen and physically remove visible deposits. Remove and clean nozzles, screens and filters separately. Flush the entire system with clean water again.
- Do not clean spray equipment near a well, bore hole, fountain or any other water sources.
- Do not contaminate crops, grazing, rivers, or dams with wash water.
- Rinse the empty container three 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.
- Destroy empty container by perforation and flattening.
- Never re-use the container for any other purpose.
- Do not contaminate food, feed, drinking water and eating utensils.

RESISTANCE WARNING

TANOS[®]PRO is a group code 27 / 11 / M4 fungicide. Any fungus population may contain individuals naturally resistant to **TANOS[®]PRO** and other group code 27 / 11 fungicides. The resistant individuals can eventually dominate the fungus population if these fungicides are used repeatedly. These resistant fungi may not be controlled by **TANOS[®]PRO** or any other group code 27 / 11 fungicides.

TANOS[®]PRO is a mixture of cymoxanil (group code 27), famoxadone (group code 11) and folpet (group code M4) fungicides having different modes of action. **TANOS[®]PRO** can be alternated with other fungicides in group code M. **However do not apply more than 6 cymoxanil containing sprays in grapes or potatoes and not more than 3 famoxadone (or any other group code 11 fungicide) containing sprays in grapes and not more than 5 famoxadone (or any other group code 11 fungicide) containing sprays in potatoes per season.** Both cymoxanil and famoxadone are active against late blight strains that are resistant to phenylamide fungicides.

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.
- For tank mixing or alternation with products in fungicide group codes M, refer to applicable individual product labels.
- Integrate the control methods (chemical, cultural, biological) into disease control programmes.

For specific information on resistance management contact the registration holder of this product.

DIRECTIONS FOR USE

USE ONLY AS DIRECTED

COMPATIBILITY

TANOS[®]PRO is compatible with Steward[®] (Reg. No. L 6322 Act No 36 of 1947), Curzate Pro[®] (Reg. No. L5698 Act No. 36 of 1947), H&R Crop Oil (Reg. No. L6802 Act No. 36 of 1947), Villa 51 (Reg. No. L7850 Act No. 36 of 1947) and Trend 90 (Reg. No. L8207 Act No. 36 of 1947) for use in potatoes, with OLYMP[®] 100 EW (Reg. No. L6063 Act No. 36 of 1947) for use in grapevines and with most products which have neutral or acidic reactions, when applied according to their manufacturer's instructions. Do not tank mix with products that have alkaline reaction. Tank mixtures that have not been evaluated for physical compatibility and crop safety must first be tested on a limited scale. Consult the manufacturer in case of uncertainty.

GENERAL

- **TANOS[®]PRO** consists of three unrelated highly active ingredients with unique modes of action namely: cymoxanil, a locally systemic fungicide with preventive and curative action, famoxadone, a preventive, residual fungicide active on spore formation and germination and folpet a fungicide with protective action.
- **TANOS[®]PRO** is most effective when applied preventively or at the early stages of infections, before symptoms are visible on the plants. Apply sufficient spray mixture per hectare to give a good spray coverage of the treated crops.
- **TANOS[®]PRO** must not be applied to any crop suffering from stress as a result of drought, water logging, low temperature, insect attack, nutrient or lime deficiency or other factors reducing crop growth.
- Cymoxanil rapidly penetrates into plant tissue while the famoxadone and folpet is left on the surface wax layers of the cuticle. Famoxadone binds firmly to the wax layers of the foliage, while folpet redistributes with wetting.
- **TANOS[®]PRO** is rainfast three hours after application. If rain occurs within three hours after treatment, the product performance may be affected and the application must be repeated.

MIXING INSTRUCTIONS AND CLEANING OF SPRAY EQUIPMENT

- Before using **TANOS[®]PRO** make sure the spraying equipment is clean.
- The required amount of **TANOS[®]PRO** can be accurately weighed, or volumetrically measured. A standard volumetric calibrated measuring cylinder or jug, filled to the 200 ml mark is approximately equal to 100 g **TANOS[®]PRO**. Pour **TANOS[®]PRO** in measuring jug or cylinder and shake gently once or twice in order to determine the volume of product. A variance of up to 10 % can result when **TANOS[®]PRO** is measured by means of the volumetric method.
- Premix the required amount **TANOS[®]PRO** with a small quantity of water to form a thin paste.
- Half fill the spray tank with water and start the agitator. Then add the required amount of **TANOS[®]PRO** to the spray tank. Continue agitation while topping up the tank with required volume of water and while spraying.

AERIAL APPLICATION

TANOS[®]PRO can be applied aerially as part of a preventive spray programme in **potatoes**.

Aerial application of **TANOS[®]PRO** 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 Pesticides). 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 be met:

- Volume: A spray mixture volume of at least 40 l per hectare is recommended. As this product has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy, or be held responsible for any adverse effects if this product is applied aerially at a lower volume rate than recommended above.
- Droplet coverage: 50 to 70 droplets per cm² must be recovered at the target area.
- Droplet size: A droplet spectrum with a VMD of 250 microns is recommended. Limit the production of fine droplets less than 150 microns (high drift and evaporation potential) to a minimum.
- Flying height: Maintain the height of the spray boom at 3 to 4 metres above the target. Do not spray when aircraft dives, is in a climb or when banking
- Use suitable atomising equipment that will produce the desired droplet size and coverage, but which will ensure the minimum loss of product. The spraying system must produce a droplet spectrum with the lowest possible Relative Span.
- Position all the atomisers within the inner 60 to 75 % of the wingspan to prevent droplets from entering the wingtip vortices.
- 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.
- Stop spraying under turbulent, unstable and dry conditions during the heat of the day.
- Spraying under temperature inversion conditions (spraying in or above the inversion layer) and/or high humidity conditions (relative humidity 80 % and above) may lead to the following:
 - reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage).
 - damage to other sensitive crops and/or non-target areas through drifting of the suspended spray cloud away from the target field.
- Ensure that the Aerial Spray Operator knows exactly which fields to spray.
- Obtain an 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.

CROP AND DISEASE	DOSAGE / 100 ℓ WATER OR AS INDICATED	DETAILS OF SPRAY PROGRAMME
GRAPES (Table and wine) Downy mildew (<i>Plasmopara viticola</i>)	150 g	H.V. Apply as a full cover spray and depending on vine size, 500-1 500 ℓ spray mixture per ha. Commence applications when the first shoots are 10 cm long. Repeat applications at 10-14 day intervals. Use a shorter (7-10 day) interval when conditions are very favourable for disease development. Do not apply more than 3 TANOS® PRO and/or EQUATION® PRO applications in total per season. Do not apply within 28 days of harvest in wine grapes and after berries have reached pea size in table grapes. Adhere to all precautions and warnings and other instructions on this label. Pay specific attention to the resistance warning and adhere to anti-resistance recommendations on this label.
POTATOES Late blight (<i>Phytophthora infestans</i>) and Early blight (<i>Alternaria solani</i>)	GROUND APPLICATION: 2,25 kg/ha TANOS® PRO PLUS 500 mℓ/ha H&R Crop Oil OR 100mℓ/100 ℓ spray mixture Trend 90 OR 100mℓ/100 ℓ spray mixture Villa 51	Follow a preventive late and early blight spray programme at all times. Use TANOS® PRO at any stage of crop development whenever environmental conditions become favourable for late blight infection (cool, overcast weather with rain or irrigation) and early blight infection (heavy dew, frequent rainfall and warm conditions). See 'IMPORTANT' at end of table. Apply as a full cover spray and depending on plant size in 500–1 500 ℓ water/ha. Apply TANOS® PRO at spray intervals of 7–10 days, as part of a spray programme. Use the shorter interval when conditions are highly favourable for late or early blight development. Two to three back to back applications of TANOS® PRO (and/or TANOS® contact fungicide tank mixture) are recommended as part of a spray programme against late blight. Weekly alternation of the TANOS® PRO with the maximum registered dosage rate of a contact fungicide (mancozeb, chlorothalonil or folpet) can be used under moderate disease pressure as part of a spray programme against early blight. Pay specific attention to the resistance warning and adhere to anti-resistance recommendations on this label.

CROP AND DISEASE	DOSAGE / 100 ℓ WATER OR AS INDICATED	DETAILS OF SPRAY PROGRAMME
<p>POTATOES (continued) Late blight (<i>Phytophthora infestans</i>)</p> <p>and</p> <p>Early blight (<i>Alternaria solani</i>)</p>	<p>AERIAL APPLICATION: 2,5 kg/ha TANOS[®] PRO</p> <p>PLUS</p> <p>500 ml H&R Crop Oil/ha</p>	<p><u>Apply as above when tractor application is not possible and adhere to the following additional conditions:</u></p> <p>Aerial application of TANOS[®] PRO against late and early blight is only recommended when used in a weekly preventive spray programme before infection occurs. Applications should commence shortly post emergence of the crop. Minimum spray volume for TANOS[®] PRO is 40 ℓ/ha. Aerial application results in weaker crop coverage, which may result in decreased disease control (late and early blight) in comparison to tractor applications.</p> <p>General: Do not apply more than 3 TANOS[®] PRO (and/or TANOS[®] plus contact fungicide tank mixture) applications in total per season, or apply more than 3 back to back TANOS[®] PRO (and/or TANOS[®] plus contact fungicide tank mixture) applications in total. Alternate with other registered fungicides throughout the season. Note resistance warning on label. The addition of H&R Crop Oil at 500 ml/ha or Trend[®] 90 at 100ml/100 ℓ spray mixture or Villa 51 at 100ml/100 ℓ spray mixture is recommended in tank mixture with TANOS[®] PRO in potatoes under all conditions.</p>
<p>IMPORTANT TANOS[®] PRO has a curative action of up to 2 days against late blight. This means that TANOS[®] PRO can control the fungus inside the plant up to two days after infection has occurred, BUT before late blight symptoms become visible. Late blight symptoms on leaves develop 2-3 days post infection. As late blight symptoms only become prevalent on stems after 10-14 days, curative action on stem blight can not be expected under all conditions. Do not use TANOS[®] PRO for eradicated late blight control, when symptoms and especially stem lesions are visible within the plant canopy.</p>		

H&R Crop Oil is the tradename of H&R South Africa Sales (Pty) Ltd
Villa 91 is the trade name of Villa Crop Protection (Pty) Ltd