

SpinoCide 480 SC

Act No. 36 of 1947 / Wet Nr. 36 van 1947 SA Reg. No. L11612 / BWA Reg. No. W130184

READ ATTACHED PACKAGED LEAFLET BEFORE USE • KEEP OUT OF REACH OF CHILDREN AND ANIMALS

GROUP	5	INSECTICIDE
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WARNING



What is
GHS?

PRODUCT INFO:
A suspension concentrate, contact and stomach insecticide for the control of insect pests on crops as listed.

PRODUK INFO:
'n Suspensie konsentraat kontak- en maaginsektdoder vir die beheer van insekplae op gewasse soos gelys.

HAZARD STATEMENTS:
Causes mild skin irritation
Causes serious eye irritation
Very toxic to aquatic life with long lasting effects

PRECAUTIONARY STATEMENTS:
Wear protective gloves, protective clothing, eye, and face protection. Wash hands, face, and exposed skin thoroughly after handling. Do not touch eyes.

Active Ingredient / Aktiewe Bestanddeel

Spinosad (naturalyte)

480 g/l

Spinosad (naturaliet)

Net (l) 500 ml

Registration Holder / Registrasiehouer



ICA International Chemicals (Pty) Ltd. • Reg. No. 2001/013319/07
28 Planken Street • Plankenbrug Industrial
STELLENBOSCH • 7600 • SOUTH AFRICA
Tel. +27-21 886 9812 • www.icaonline.co.za

Batch No.
Date of
Manufacture
Expiry Date

SEE
CONTAINER

Lot Nr.
Datum van
Vervaardiging
Vervaldatum

In case of poisoning, call the following number: Human Poison Helpline +27-861 555 777 • Emergency number: Griffon Poison Information Centre +27-82 446 8946

UN No. 3082

Group III

SAB-SS-500ml-002

SpinoCide 480 SC

Act No. 36 of 1947
SA Reg. No. L11612 / BWA Reg. No. W130184

A suspension concentrate, contact and stomach insecticide for the control of insect pests on crops as listed.

ACTIVE INGREDIENT:

Spinosad (naturalyte) 480 g/l

REGISTERED BY:

ICA International Chemicals (Pty) Ltd., Reg. No. 2001/013319/07
28 Planken Street • Plankenbrug Industrial • Stellenbosch • 7600 • South Africa
Tel. +27-21 886-9812 • www.icaonline.co.za

WARNINGS

Causes mild skin irritation
Causes serious eye irritation
Very toxic to aquatic life with long lasting effects

WITHHOLDING PERIODS (Minimum number of days between last application and harvest):

- ▶ Apples 30 Days
- ▶ Bulb vegetables (chives, leeks, onions) 7 Days
- ▶ Cherries 14 Days
- ▶ Citrus 14 Days
- ▶ Lettuce 7 Days
- ▶ Nectarines 7 Days
- ▶ Peaches 21 Days
- ▶ Pears 14 Days
- ▶ Plums 21 Days
- ▶ Potatoes 7 Days
- ▶ Strawberries 1 Day
- ▶ Table Grapes 28 Days
- ▶ Tomatoes 3 Days

Compliance with these withholding periods and application methods 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 and recommended withholding periods. Although **SpinoCide 480 SC** is regarded as crop-safe on most of the important cultivars, this does not mean that a more sensitive cultivar might be available in future. **SpinoCide 480 SC** must be tested on **new cultivars** prior to usage over large areas.

RE-ENTRY INTERVAL: Do not enter treated area until spray deposit has settled down / 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 climatic and storage conditions, quality of dilution water, compatibility with other substances not indicated on the label and the occurrence of resistance of the pest 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 man/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.
Keep out of reach of children.
Read carefully and follow all instructions.
Avoid release to the environment.
Wear protective gloves, protective clothing, eye and face protection.
Wash hands and face thoroughly after handling. Do not touch eyes.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If skin irritation occurs: Get medical help.
If eye irritation persists: Get medical help.
Collect spillage.
Store locked up.
Dispose of contents and container in accordance with national regulations.

Prevent spray or mist drifting onto other crops, grazing, rivers, dams, and other areas not under treatment.
Clean all equipment thoroughly after use and dispose of wastewater without polluting the environment.

TRIPLE RINSE THE EMPTY CONTAINER AS FOLLOWS: Invert empty container over mix or spray tank and allow draining for at least 30 seconds until flow has slowed to a drip. Triple rinse the empty container with clean water equal to a minimum of 30 % of the volume of the container. Add rinsing to the contents of

the spray tank. Puncture the triple rinsed container and dispose of via an approved collector or recycler (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.

RELEVANT SUBSTANCES:

Spinosad (Cas no: 168316-95-8) Aquatic Acute Category 1, H400; Aquatic Chronic Category 1, H410 (48 % w/v).

Naphthalene sulphonate salified derivative, polymer with formaldehyde (Cas no: 68425-94-5) Skin Irritant Category 3, H316; Eye Irritant Category 2, H319 (< 10 % w/v).

FIRST AID MEASURES

In case of accident or if you feel unwell seek medical advice immediately and show this LABEL where possible.

- INHALATION:**
- Remove the victim from immediate source of exposure. Move victim to fresh air, if it can be done safely, and keep comfortable. If victim's breathing has stopped, perform artificial respiration.
- SKIN:**
- Administer oxygen if victim's breathing is difficult or irregular. Get medical help.
 - Remove contaminated clothing, shoes, and leather goods immediately.
 - Rinse affected areas with non-abrasive soap or mild detergent and large amounts of running water. Wash contaminated clothing before reuse. Get medical help if irritation develops and persists.
- EYES:**
- Rinse cautiously with water for several minutes.
 - Remove contact lenses after 5 minutes if present and easy to do. Continue rinsing while holding eyelids apart. Seek medical help if irritation continues.
- INGESTION:**
- If swallowed, DO NOT induce vomiting, unless instructed to do so by poison control center or doctor.
 - Have person sip a glass of water if able to swallow. Never give anything by mouth to an unconscious person. If vomiting does occur, keep on giving fluids. Get medical help if any symptoms develop.
- NOTE TO PHYSICIAN:**
- There is no specific antidote. All treatments should be based on observed signs and symptoms of distress in the patient.
- POTENTIAL HEALTH EFFECTS, ACUTE AND DELAYED:**
- Effects of exposure (inhalation, ingestion, or skin contact) to substance may be delayed.

RESISTANCE WARNING

INSECTICIDE RESISTANCE MANAGEMENT (IRM)

For resistance management, **SpinoCide 480 SC** is an IRAC group code (5) insecticide. Any insect population may contain individuals naturally resistant to **SpinoCide 480 SC** and other group code (5) insecticides. The resistant individuals can eventually dominate the insect population if these insecticides are used repeatedly. These resistant insects may not be controlled by **SpinoCide 480 SC** or any other group code (5) insecticides.

For specific information on resistance management, contact the registration holder of this product. Since the occurrence of resistance cannot be predicted, users are advised to keep treated plants under close observation. If treatment is not effective following the use of **SpinoCide 480 SC** as recommended, a resistant strain may be present. If a resistant strain is positively identified, consideration should be given to prompt use of an insecticide with a different mode of action for which there is no record of resistance.

To delay insecticide resistance:

- ▶ avoid exclusive repeated use of insecticides from the same insecticide group code. Alternate or tank mix with registered products from different insecticide group codes,
- ▶ for tank mixing or alternation with products in other insecticide group codes, refer to applicable individual product labels,
- ▶ do not use less than the recommended label rates of insecticides,
- ▶ applications should be targeted against early insect developmental stages whenever possible,
- ▶ monitor treated insect populations in the field for loss of product effectiveness,
- ▶ integrate other control methods (chemical, cultural, biological) into pest management programmes.

INTEGRATED PEST MANAGEMENT (IPM) PROGRAMMES

SpinoCide 480 SC can be used as part of IPM programmes in various crops and should be applied when field scouting indicates that the population density of target pests has reached the economic threshold (the point at which the insect population must be reduced to avoid economic losses beyond the cost of control) as described under recommendations. **SpinoCide 480 SC** applications should be targeted against the early instar larvae and/or eggs of the pest whenever possible. **SpinoCide 480 SC** used under good agricultural practice (GAP), does not have a significant impact on certain parasitic insects or the natural predaceous arthropod complex in treated crops, including big-eyed bugs, ladybird beetles, flower bugs, lacewings, minute pirate bugs, damsel bugs, assassin bugs, predatory mites, or spiders. The presence of these beneficials will aid in natural control of other insects and reduce the likelihood of secondary pest outbreaks. However, if **SpinoCide 480 SC** is tank mixed with an insecticide that reduces the selectivity in preserving beneficial predatory insects, then the full benefit of **SpinoCide 480 SC** to the IPM programme may decrease.

Effects on beneficial organisms:

- ▶ Bees and young bees – moderately toxic
 - **SpinoCide 480 SC** is toxic to bees and bee colonies when exposed to direct spray or sprayed flowering crops when still wet. When the spray deposit has dried, the effect on bees is minimum.
 - Do not apply directly to foraging bees and allow at least 3 hours between application and foraging periods.
 - When crops are flowering or any other bee food vegetation, including flowering weeds, is within 500 m of the treated area, **SpinoCide 480 SC** should be applied early evenings when bees have returned to their hives.
 - Communicate with beekeepers, neighbours and local extension services when applying to crops in the vicinity of other flowering crops. Take special care where pollination is required for fruit production.
- ▶ Parasitoids – harmful
 - Although **SpinoCide 480 SC** is regarded harmful towards parasitoids, a rapid recovery of numbers can be observed after application.
- ▶ Predatory mites – harmless
- ▶ Coccinellidae – slightly harmful
- ▶ Neuroptera – slightly harmful

- ▶ Citrus beneficial insects:
 - ▶ *Chilochorus nigritus* – slightly harmful
 - ▶ *Aphytis lingnanensis* – harmful
 - ▶ *Coccidoxenoides peregrinus* – very harmful
 - ▶ *Trichogrammatoidea cryptophlebiae* – slightly harmful
 - ▶ *Euseius citri* – slightly harmful

MODE OF ACTION

Spinosad is a spinosyn (naturalyte) insecticide (IRAC group 5) with contact and stomach action. It acts by exciting the insect nervous system, leading to involuntary muscle contractions and paralysis. Nicotinic acetylcholine receptor (nAChR) allosteric modulators – Site I.

USE RESTRICTION

- Do not apply during windy conditions.
- Apply directly to the target crop and ensure minimal spray drift.
- Should it rain within two (2) hours after application, the application must be repeated.
- Do not apply in muddy water.

DIRECTIONS FOR USE – use only as directed

COMPATIBILITY:

SpinoCide 480 SC is generally compatible with fungicides and non-ionic adjuvants with spreading and penetrating properties. The compatibility of **SpinoCide 480 SC** with other products depends on the formulations of the respective products as well as the quality of the spray water to be used. **Do not apply SpinoCide 480 SC in muddy water.** It is possible that formulations may change from time to time. **It is therefore recommended, especially when using wetting agents, that a small-scale physical compatibility test (jar test) be done prior to the tank mixture being made using relative proportions of the tank mix ingredients.** If foliar fertilizers are used, the compatibility test must be repeated with each batch. Always consult the labels of products to be tank mixed with **SpinoCide 480 SC**.

MIXING INSTRUCTIONS:

Shake the SpinoCide 480 SC container well before use. Replace cap directly after use. A spray tank pH between 6.0 and 9.0 is suggested to achieve maximum performance of **SpinoCide 480 SC**, a low pH value (< pH 6) of the spray mixture will decrease the residual performance. If the water source is outside of this pH range, or tank mixing other pesticides, adjuvants, or foliar nutrients will cause the pH to fall outside this range, consider adjusting the spray tank pH to be between 6.0 and 9.0 before adding **SpinoCide 480 SC**. To do this, add all other tank mix components first, then check the spray tank pH, adjust if desired, and then add **SpinoCide 480 SC**.

SpinoCide 480 SC alone:

Fill the spray tank with water to half (½) of the required spray volume, start to agitate and add a buffer if required. Add the correct quantity of **SpinoCide 480 SC** to the spray tank while agitating to form a homogenous emulsion. Fill the spray tank with rest of the water while agitating. Maintain sufficient agitation during application to ensure uniformity of the spray mix.

SpinoCide 480 SC tank mixture:

Fill the spray tank with water to one quarter (¼) of the required spray volume. While agitating the spray tank water, add the products in the following sequence – buffer, wettable powders, water dispersible granules, **SpinoCide 480 SC** and other suspension concentrates, emulsifying concentrates, soluble concentrates and surfactants/adjuvants last. Top up the mixing tank with clean water to the required spray volume whilst agitating. Agitate constantly and vigorously before and during application. To prevent foam formation, avoid mixing air into the spray mixture. Use the spray mixture immediately, do not leave in spray tank for a length of time, e.g., overnight. Clean all equipment thoroughly after use and dispose of wastewater without polluting the environment.

APPLICATION:

Ensure that the equipment is correctly calibrated and is checked regularly to ensure even and accurate application. Maintain sufficient agitation during application to ensure uniformity of the spray mix. Repeat the application if it rains within two (2) hours after application. Hollow cone nozzles suitable for insecticide applications are recommended. The following recommendations are provided for effective **SpinoCide 480 SC** applications:

Row crop applications:

- Use conventional ground spray equipment, correctly calibrated, for optimal coverage of target crop.
- Align boom and nozzles for uniform coverage of target crop.
- Certain conditions may require nozzles on drop arms for uniform crop coverage.
- Always follow manufacturer's recommendations for ideal nozzle spacing, pressure, and boom height.

Fruit tree crops applications:

- Use conventional orchard spray equipment, correctly calibrated, for optimal coverage of target crop and the correct rate per hectare.

▶ **Deciduous fruit tree crops applications:**

- Apply **SpinoCide 480 SC** as a high volume spray to deciduous fruit trees.
- Calculate the required spray (water mixture) volume (ℓ) per hectare (ha) for high volume application using the tree row volume (TRV) calculation:

- **TRV (Green tip to +/- 30 % blossom)**

$$\ell \text{ water/ha} = [(Tree \text{ Height} \times Tree \text{ Diameter} \times 937)/Row \text{ Width}] \times 60 \%$$

- **TRV (Full blossom to +/- middle November)**

$$\ell \text{ water/ha} = [(Tree \text{ Height} \times Tree \text{ Diameter} \times 937)/Row \text{ Width}] \times 80 \%$$

- **TRV* (Full leaf)**

$$\ell \text{ water/ha} = [(Tree \text{ Height} \times Tree \text{ Diameter} \times 937)/Row \text{ Width}] \times 100 \%$$

Use the above formula to calculate the required spray volume of **SpinoCide 480 SC** per hectare. It is important that the correct amount of **SpinoCide 480 SC** per hectare is applied.

Tree height and tree width must be measured when trees are in full flush.

*Tree Row Volume (TRV) formula described by Unrath (Deciduous Fruit Grower Nov. 1986)

➤ **Table grape applications:**

- Apply **SpinoCide 480 SC** as a high volume spray to table grapes.
- Calculate the spray volume (ℓ) per hectare (ha) required for a high volume application during the specified growth stage using the following guidelines:

Growth Stage	Suggested spray volume for high volume application
2,5 cm to 25 cm shoot length	500 – 750 ℓ/ha
25 cm shoot length to just prior to flowering	750 – 1000 ℓ/ha
Flowering to pea berry stage	1000 – 1200 ℓ/ha
Pea berry stage to harvest	1200 – 1500 ℓ/ha

Warning: Where crops are produced under shade cloth, the breakdown of spinosad may take longer which will increase the withholding period/residues.

ADJUVANT:

Registered adjuvants may be used to improve the control of leafminers and thrips in situations where achieving uniform plant coverage is difficult (such as closed crop canopies or dense foliage), or if the fruit/plant surface to be treated is waxy or difficult to wet.

APPLICATION TABLE		
CROP and PEST	DOSAGE	REMARKS
BULB VEGETABLES (chives, leeks, and onions) Thrips (<i>Thrips tabaci</i>)	15 mℓ (75 – 150 mℓ/ha) + 150 – 250 mℓ light or medium narrow range mineral spray oil OR A registered wetter at the registered dosage rate for use on chives/ leeks/onions per 100 ℓ	<ul style="list-style-type: none"> • Apply SpinoCide 480 SC in a spray programme as a full cover spray at 500 – 1000 ℓ/ha, ensure thorough wetting of plants, refer to directions for use (application recommendations). • Commence application when the pest is first noticed or apply as a follow-up application within a spray programme after insecticides from a different mode of action group. • Regular monitoring is important to determine when the first application must commence. Note that hot weather conditions favour thrip activity. • Apply a minimum of two (2) consecutive SpinoCide 480 SC sprays to ensure effective pest management. • Apply every 7 – 10 days, use the shorter interval of 7 days in the case of heavy infestations or during favourable weather conditions. • Some thrip damage may still be observed, despite a management programme. <p>Resistance management: Do not exceed more than four (4) consecutive applications of SpinoCide 480 SC in any 28-day period. Rotate SpinoCide 480 SC in a spray programme with insecticides from different group codes for one generation of thrips. Do not exceed more than six (6) SpinoCide 480 SC applications per crop cycle.</p>
CITRUS African bollworm (<i>Helicoverpa armigera</i>)	20 mℓ/100 ℓ	<ul style="list-style-type: none"> • Bollworm: Apply SpinoCide 480 SC as a high volume cover application, refer to directions for use (application recommendations). • Commence spraying when infestation level is at or above threshold level. • Note: Applied as a single corrective spray, SpinoCide 480 SC is more effective against the early instar larvae stage of bollworm.
Citrus thrips (<i>Scirtothrips aurantii</i>)	15 mℓ + 300 mℓ of a registered light or medium narrow range mineral spray oil per 100 ℓ	<ul style="list-style-type: none"> • Thrips: Apply SpinoCide 480 SC as a light to medium cover application to the point of run-off. • Commence spraying at 90 % petal fall at the first signs of infestation. Note that hot weather conditions favour thrip activity. • Depending on the level of infestation, follow-up applications within 7 – 10 days may be required for adequate control. <p>Resistance management: Apply no more than four (4) times per season. Alternate with a different class of insecticide for Resistance Management purposes.</p>
LETTUCE African bollworm (<i>Helicoverpa armigera</i>)	20 mℓ (100 – 200 mℓ/ha) + 150 – 250 mℓ light or medium narrow range mineral spray oil OR	<ul style="list-style-type: none"> • Apply SpinoCide 480 SC in a spray programme as a full cover spray at 500 – 1000 ℓ/ha spray mixture, ensure thorough wetting of plants, refer to directions for use (application recommendations). • Commence application when the pest is first noticed or apply as a follow-up application within a spray programme after insecticides from a different mode of action group. • Regular monitoring is important to determine when the first application must commence. • Apply a minimum of two (2) consecutive SpinoCide 480 SC sprays to ensure effective pest control.

	A registered wetter at the registered dosage rate for use on lettuce per 100 ℓ	<ul style="list-style-type: none"> Spray mixture every 7 – 10 days, use the shorter interval of 7 days in the case of heavy infestations or during warm, humid weather conditions that can favour development and dispersal of the pest. The spray mixture volume to be applied per hectare (ha) depends on the plant size. Start with a minimum of 500 ℓ/ha spray mixture on young plants and increase the volume up to 1000 ℓ/ha as plant size increases. <p>Resistance management: Do not exceed more than four (4) consecutive applications of SpinoCide 480 SC in any 28-day period. Rotate SpinoCide 480 SC in a spray programme with insecticides from a different chemical class for the duration of at least one generation of the pest. Apply no more than six (6) times per crop cycle</p>
POME FRUIT (apples and pears) African bollworm (<i>Helicoverpa armigera</i>)	20 mℓ/100 ℓ	<p>Apply SpinoCide 480 SC as a full cover application, refer to directions for use (application recommendations). Commence spraying when monitoring indicates an infestation level at or above the threshold level.</p> <ul style="list-style-type: none"> Bollworm: Applied as a single corrective spray, SpinoCide 480 SC is more effective against the early instar larvae stage.
(apples) Thrips (Various species including Western Flower Thrips, <i>Frankliniella occidentalis</i>)	15 mℓ/100 ℓ	<ul style="list-style-type: none"> Thrips: The critical period during which thrips are prone to cause the most damage is normally during the period of early blossom to shortly after blossom. Regular monitoring during this period is important to determine when the first application must commence. Note that hot weather conditions favour thrip activity. Depending on the duration of the flowering period and the level of infestation, a follow-up application within 7 – 10 days may be required for adequate control. <p>Resistance management: Apply no more than four (4) times per season.</p>
POTATOES Potato leaf miner (<i>Liriomyza huidobrensis</i>) Potato tuber moth larvae (<i>Phthorimaea operculella</i>)	<p>30 mℓ + 150 – 250 mℓ light or medium narrow range mineral spray oil</p> <p>OR</p> <p>A registered wetter at the registered dosage rate for use on potatoes per 100 ℓ</p>	<ul style="list-style-type: none"> Apply SpinoCide 480 SC in a spray programme as a full cover application at 500 – 1000 ℓ/ha spray mixture, refer to directions for use (application recommendations). The spray mixture volume to be applied per hectare (ha) depends on the plant size and canopy density. Start with a minimum of 500 ℓ/ha spray mixture on young plants and increase the volume up to 1000 ℓ/ha as plant size increases. Commence spraying at first symptoms of infestation (mines) or apply as a follow-up application within a spray programme after insecticides from different chemical classes. Apply a minimum of two (2) consecutive SpinoCide 480 SC sprays to ensure effective pest control. Spray mixture every 7 – 10 days, use the shorter interval of 7 days in the case of heavy infestations, during weather conditions that favour development and dispersal of the pest or when beneficial insects are absent. <p>Resistance management: Do not apply SpinoCide 480 SC in more than four (4) consecutive applications in any 28-day period. Rotate SpinoCide 480 SC in a spray programme with a different chemical class of insecticide for the duration of at least one generation of the pest. Apply no more than six (6) times per crop cycle. In the case of potato leaf miner control, rotate SpinoCide 480 SC with abamectin containing insecticides.</p> <p>Ridge at least twice during the growing season for potato tuber moth.</p>
STONE FRUIT (cherries, nectarines, peaches, plums) African bollworm (<i>Helicoverpa armigera</i>)	20 mℓ/100 ℓ	<ul style="list-style-type: none"> Apply SpinoCide 480 SC in a spray programme as a high volume cover application, refer to directions for use (application recommendations). Commence spraying when infestation level is at or above threshold level. Note: Applied as a single corrective spray, SpinoCide 480 SC is more effective against the early instar larvae stage of bollworm.
(cherries, nectarines, plums) Thrips (Various species including Western flower thrips, <i>Frankliniella occidentalis</i>)	15 mℓ/100 ℓ	<ul style="list-style-type: none"> The critical period during which thrips are prone to cause the most damage is normally during the period of early blossom to shortly after blossom. Regular monitoring during this period is important to determine when the first application must commence. Note that hot weather conditions favour thrip activity. Depending on the duration of the flowering period and the level of infestation, a follow-up application within 7 – 10 days may be required for adequate control. Refer to directions for use for application recommendations.

		<p>Cherries</p> <ul style="list-style-type: none"> Apply SpinoCide 480 SC as a light cover application when the pest is first noticed. <p>Nectarines</p> <ul style="list-style-type: none"> The critical period during which thrips are prone to cause the most damage on nectarines is normally during the period of early blossom to shortly after blossom (early damage) but also shortly before harvest (silvering damage). Regular monitoring during these periods is important to determine when the first application must commence. Note that hot weather conditions favour thrip activity. Early damage: Apply SpinoCide 480 SC during flowering as a high volume cover application when thrips threshold level is reached. Depending on the duration of the flowering period and the level of infestation, a follow-up application within 7 – 10 days may be required for adequate control. Silvering damage: Apply SpinoCide 480 SC as a high volume cover application when first thrip activity responsible for silvering, is noticed. Do not apply within 7 days of harvest. <p>Plums</p> <ul style="list-style-type: none"> Apply SpinoCide 480 SC during flowering as a high volume cover application when thrips threshold level is reached, refer to directions for use (application recommendations). <p>Resistance management: Apply no more than four (4) times per season on nectarines, peaches and plums, and no more than three (3) times per season on cherries. Adhere to withholding periods for each crop.</p>
<p>STRAWBERRIES African bollworm (<i>Helicoverpa armigera</i>)</p>	20 mℓ/100 ℓ	<ul style="list-style-type: none"> Bollworm: Apply SpinoCide 480 SC as a full cover application, refer to directions for use (application recommendations). Commence spraying when infestation level is at or above threshold level. Note: Applied as a single corrective spray, SpinoCide 480 SC is more effective against the early instar larvae stage of bollworm.
<p>Thrips (Various species including Western flower thrips, <i>Frankliniella occidentalis</i>)</p>	15 mℓ/100 ℓ	<ul style="list-style-type: none"> Thrips: Apply SpinoCide 480 SC as a light cover application at the first signs of thrips presence and repeat application after 7 days, if necessary, refer to directions for use (application recommendations). Regular monitoring is important to determine when the first application must commence. Note that hot weather conditions favour thrip activity. <p>Resistance management: Apply no more than three (3) times per crop cycle. Alternate the use of SpinoCide 480 SC with registered insecticides with a different mode of action.</p>
<p>TABLE GRAPES African bollworm (<i>Helicoverpa armigera</i>)</p>	20 mℓ/100 ℓ	<ul style="list-style-type: none"> Bollworm: Apply SpinoCide 480 SC as a high volume cover application, refer to directions for use (application recommendations). Commence spraying when infestation level is at or above threshold level. Note: Applied as a single corrective spray, SpinoCide 480 SC is more effective against the early instar larvae stage of bollworm.
<p>Thrips (Various species including Western flower thrips, <i>Frankliniella occidentalis</i>)</p>	15 mℓ/100 ℓ	<ul style="list-style-type: none"> Thrips: Apply SpinoCide 480 SC during flowering as a high volume cover application when thrips threshold level is reached, refer to directions for use (application recommendations). The critical period during which thrips are prone to cause the most damage is normally during the period of early flowering to shortly after flowering. In some areas and under favourable conditions (hot and dry weather), thrips may occur at a later stage during the season. Regular monitoring is important to determine when the first application must commence. Depending on the duration of the flowering period and the level of infestation, a follow-up application within 5 – 7 days may be required for adequate control. <p>Resistance management: Apply no more than two (2) consecutive applications in total per season, adhere to 28 days withholding period.</p>
<p>TOMATOES American leaf miner (<i>Liriomyza trifolii</i>)</p>	30 mℓ (150 – 300 mℓ/ha) +	<ul style="list-style-type: none"> Apply SpinoCide 480 SC in a spray programme as a full cover spray at 500 – 1000 ℓ/ha spray mixture, ensure thorough wetting of plants, refer to directions for use (application recommendations).

<p>Tomato leaf miner (<i>Tuta absoluta</i>)</p>	<p>150 – 250 mℓ light or medium narrow range mineral spray oil</p> <p>OR</p> <p>A registered wetter at the registered dosage rate for use on tomatoes</p> <p>per 100 ℓ</p>	<ul style="list-style-type: none"> • The spray mixture volume to be applied per hectare (ha) depends on the plant size and canopy density. Start with a minimum of 500 ℓ/ha spray mixture on young plants and increase the volume up to 1000 ℓ/ha as plant size increases. • Commence application when the pest is first noticed or apply as a follow-up application within a spray programme after insecticides from a different mode of action group. • Regular monitoring is important to determine when the first application must commence. • Spray mixture every 7 – 10 days, use the shorter interval of 7 days in the case of heavy infestations or during weather conditions that favour development and dispersal of the pest. Apply a minimum of two (2) consecutive SpinoCide 480 SC sprays to ensure effective pest control. <p>Resistance management: Do not exceed more than four (4) consecutive applications of SpinoCide 480 SC in any 28-day period. Rotate SpinoCide 480 SC in a spray programme with insecticides from a different chemical class for the duration of at least one generation of the pest. Apply no more than six (6) times per crop cycle.</p>
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SpinoCide 480 SC

Wet Nr. 36 van 1947
SA Reg. Nr. L11612 / BWA Reg. Nr. W130184

'n Suspensie konsentraat kontak- en maaginsekoder vir die beheer van insekplae op gewasse soos gelys.

AKTIEWE BESTANDEEL:

Spinosad (naturaliet) 480 g/ℓ

GEREGISTREER DEUR:

ICA International Chemicals (Pty) Ltd., Reg. Nr. 2001/013319/07
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WAARSKUWINGS

Veroorsaak geringe velirritasie
Veroorsaak ernstige oogirritasie
Baie giftig vir waterlewendes organismes met langdurige gevolge

ONTHOUDINGS PERIODES (Minimum aantal dae tussen laaste toediening en oes):

- ▶ *Aarbeie* 1 Dag
- ▶ *Aartappels* 7 Dae
- ▶ *Appels* 30 Dae
- ▶ *Blaarslaai* 7 Dae
- ▶ *Bolgewasse (grasuie, preie, uie)* 7 Dae
- ▶ *Kersies* 14 Dae
- ▶ *Nektariens* 7 Dae
- ▶ *Pere* 14 Dae
- ▶ *Perskes* 21 Dae
- ▶ *Pruime* 21 Dae
- ▶ *Sitrus* 14 Dae
- ▶ *Tafeldruiwe* 28 Dae
- ▶ *Tamaties* 3 Dae

Nakoming van hierdie onthoudingsperiodes en toedieningsmetodes sal verseker dat die plaaslike maksimum residu limiete (MRL) nie oorskry word nie, maar mag dalk nie voldoen aan die invoereis van ander lande nie. Indien die gewas wat behandel gaan word, bestem is vir uitvoer, raadpleeg die betrokke in- of uitvoerder rakende die gebruik van hierdie produk, die MRL en aanbevole onthoudingsperiodes. Alhoewel **SpinoCide 480 SC** as gewasveilig beskou word op meeste van die belangrike kultivars, beteken dit nie dat 'n meer sensitiewe kultivar in die toekoms op die mark kan kom nie. **SpinoCide 480 SC** moet eers op **nuwe kultivars** getoets word voordat dit oor groot areas toegedien word.

HERBETREDINGSINTERVAL: Moet nie behandelde gebied betree alvorens die spuitneerslag droog is nie, tensy beskermende oorklere gedra word.

Alhoewel hierdie middel omvattend onder 'n groot verskeidenheid toestande getoets is, waarborg die registrasiehouer nie dat dit onder alle toestande doeltreffend sal wees nie, aangesien die werking en effek daarvan beïnvloed kan word deur faktore soos abnormale grond-, klimaats- en bergingstoestande, kwaliteit van verdunningswater, verenigbaarheid met ander produkte wat nie op die etiket aangedui is nie en die voorkoms van weerstand van die plaag teen die betrokke middel, sowel as die metode, tyd en akkuraatheid van toediening. Verder aanvaar die registrasiehouer nie verantwoordelikheid vir skade aan gewasse, plantegroei, die omgewing of vir nadelige effekte op mens of dier of vir 'n gebrek aan doeltreffendheid, as gevolg van die versuim van die gebruiker om die etiketaanwysings na te kom of as gevolg van die ontstaan van toestande wat nie kragtens die registrasie voorsien kon word nie. Raadpleeg die verskaffer in geval van enige onsekerheid.

VOORSORGMATREËLS

Indien mediese advies benodig word, hou die produkhouer of -etiket byderhand.
Hou buite bereik van kinders.
Lees sorgvuldig en volg alle instruksies.
Vermy vrystelling in die omgewing.
Dra beskermende handskoene, beskermende klere, oogbeskerming en gesigbeskerming.
Was hande en gesig deeglik na hantering. Moet nie aan oë raak nie.
INDIEN IN OË: Spoel versigtig met water vir etlike minute. Verwyder kontaklense indien aanwesig en maklik om te verwyder. Hou aan met spoel.
Indien velirritasie ontstaan: Kry mediese hulp.
Indien oogirritasie voortduur: Kry mediese hulp.
Maak stortsel bymekaar.
Berg agter slot en grendel.
Raak ontslae van inhoud en houer volgens nasionale regulasies.

Vermy die wegdryf van spuitstof na ander gewasse, weidingsgebiede, riviere, damme, en ander areas wat nie onder behandeling is nie.
Alle apparaat moet na gebruik deeglik skoongemaak word en die waswater moet weggedoen word sonder om die omgewing te besoedel.

SPOEL DIE LEË HOUER DRIE MAAL SOOS VOLG: Keer die leë houer om oor die spuit- of mengtenk en dreineer vir minstens 30 sekondes totdat die vloei tot 'n gedrup verminder het. Spoel daarna die leë houer drie keer uit met skoon water, gelykstaande aan 'n minimum van 30 % van die houer se volume, en giet die spoelwater in die spuit- of mengtenk. Kap gate in die drie keer gespoelde houer, waarna dit aan 'n goedgekeurde versamelaar of verwerker oorhandig moet word (www.croplife.co.za). Moet nie die houer begrawe, verbrand of aan enige ander partye skenk wat dit as houer vir voedsel of drinkgoed mag gebruik nie.

RELEVANTE STOWWE:

Spinosad (Cas no: 168316-95-8) Waterlewend Akueel Kategorie 1, H400; Waterlewend Kronies Kategorie 1, H410 (48 % m/v).

Naftaleensulfonaat sout derivaat, polimeer met formaldehid (Cas no: 68425-94-5) Vel Irritasie Kategorie 3, H316; Oog Irritasie Kategorie 2, H319 (< 10 % m/v).

NOODHULP BEHANDELING

In geval van 'n ongeluk of as jy onwel voel, verkry onmiddellik mediese advies en wys hierdie ETIKET waar moontlik

- INASEMING:**
- Neem die slagoffer weg van die onmiddellike bron van blootstelling. Verskuif die slagoffer na vars lug as dit veilig gedoen kan word en hou gemaklik. Indien die slagoffer ophou asemhaal, pas kunsmatige asemhaling toe.
- VEL:**
- Dien suurstof toe as die slagoffer se asemhaling moeilik of onreëlmatig is. Verkry mediese hulp.
 - Verwyder en isoleer besmette klere, skoene en leergoedere dadelik.
 - Spoel aangetaste areas onmiddellik met nieskurende seep of sagwerkende wasmiddel en groot hoeveelhede lopende water. Was besmette klere voor hergebruik. Kry mediese hulp indien irritasie ontwikkel en voortduur.
- OË:**
- Spoel oë versigtig met skoon lopende water vir etlike minute.
 - Verwyder kontaklense na 5 minute indien aanwesig en maklik om te doen. Hou aan met spoel terwyl ooglede vanmekaar gehou word. Kry mediese hulp indien irritasie voortduur.
- OPNEMING:**
- Indien ingesluk, MOET NIE vomering induseer nie, tensy 'n gifsentrum of dokter opdrag gee om dit te doen.
 - Laat die persoon slukkies water neem indien dit moontlik is om te sluk. Moet nooit iets per mond aan 'n bewustelose persoon gee nie. Indien die persoon wel vomeer, hou aan om vloeistowwe te gee. Verkry mediese hulp.
- NOTA AAN GENEESHEER:**
- Daar is nie 'n spesifieke teenmiddel nie. Alle behandeling moet gebaseer word op waargenome tekens en simptome van nood by die pasiënt.
- MOONTLIKE GESONDHEIDSGEVOLGE, AKUELE EN VERTRAAGDE:**
- Gevolge van blootstelling (inaseming, opneming of velkontak) aan stof kan vertraag wees.

WEERSTANDSWAARSKUWING

INSEKDODER WEERSTANDBESTUUR

Vir weerstandsbestuur, **SpinoCide 480 SC** is 'n IRAC groepkode (5) insekdoder. Enige insekpopulasie mag individue insluit wat 'n natuurlike weerstand teen **SpinoCide 480 SC**, of enige ander groepkode (5) insekdoders het. Indien hierdie groepkode (5) insekdoders herhaaldelik aangewend word, kan die weerstandbiedende individue uiteindelik die insekpopulasie oorheers. Hierdie weerstandbiedende insekte sal waarskynlik nie deur **SpinoCide 480 SC** of enige ander groepkode (5) insekdoders beheer word nie.

Vir spesifieke inligting oor weerstandsbestuur, kontak gerus die registrasiehouer van hierdie produk. Aangesien die voorkoms van weerstand nie voorspel kan word nie, word die verbruikers sterk aanbeveel om die behandelde area behoorlik te monitor. Indien die aanbevole **SpinoCide 480 SC** behandeling nie effektief was nie, kan 'n weerstandbiedende populasie teenwoordig wees. Indien 'n weerstandbiedende variant positief geïdentifiseer is, moet die verbruiker dit sterk oorweeg om insekdoders met ander werkingswyses, waarvoor daar geen rekord van weerstand is nie, te gebruik.

Om die ontwikkeling van insekdoderweerstand te voorkom en te vertraag:

- ▶ vermy die eksklusiewe herhaaldelike gebruik van insekdoders met dieselfde groepkode. Wissel af, of gebruik in tenkmengsels saam met geregistreerde produkte van verskillende insekdoder groepkodes,
- ▶ raadpleeg toepaslike individuele produktetikette wanneer produkte afgewissel word, of tenkmengsels gemaak word, met produkte van ander insekdoder groepkodes,
- ▶ moet nie minder as die aanbevole dosis vir insekdoders gebruik nie,
- ▶ toedienings moet geteiken word teen vroeë insek ontwikkelingsstadia waar moontlik,
- ▶ monitor behandelde insekpopulasies in die veld vir die verlies van produkeffektiwiteit,
- ▶ integreer ander beheermaatreëls (chemies, verbouings, biologies) in insekdoder programme.

GEÏNTEGREERDE PLAAGBESTUUR (IPM) PROGRAMME

SpinoCide 480 SC kan gebruik word as deel van IPM programme in verskeie gewasse en moet toegedien word wanneer monitering aandui dat die populasiedigtheid van teikenplae die ekonomiese drempel bereik het (die punt waar die insekpopulasie verminder moet word om ekonomiese verliese te voorkom wat die koste van beheer oorskry) soos beskryf onder aanbevelings. **SpinoCide 480 SC** toedienings moet sover moontlik teen die vroeë instar larwes en/of eiers van die pes gerig wees. **SpinoCide 480 SC** wat onder goeie landboupraktyke (GAP) gebruik word, het nie 'n beduidende impak op sekere parasitiese of predatoriese insekte, insluitend goudogies, liewenheersbesies, roofmyte, spinnekoppe ens, nie. Die teenwoordigheid van hierdie voordelige organismes sal bydra tot die natuurlike beheer van ander insekte en die waarskynlikheid van sekondêre plaaguitbrake verminder. Indien **SpinoCide 480 SC** toegedien word saam met 'n insekdoder wat die selektiwiteit vir die behoud van voordelige roofinsekte verminder, dan kan dit die volle voordeel van **SpinoCide 480 SC** vir die IPM program verminder.

Effekte op voordelige organismes:

- ▶ Bye en jong bye – matig giftig
 - **SpinoCide 480 SC** is giftig vir bye en byekolonies wanneer dit blootgestel word aan direkte bespuiting of behandelde blomme terwyl dit nog nat is. Wanneer die spuitneerslag droog is, is die effek op bye minimaal.
 - Moet nie direk op aktiewe bye toedien nie en laat ten minste 3 ure tussen toediening en byvoedingsperiodes toe.
 - In tye wanneer gewasse in blom is, en of wanneer enige ander byvoedselplantegroei, insluitend onkruid in blom, binne 500 m van die behandelde area voorkom, moet **SpinoCide 480 SC** vroeg in die aand toegedien word, sodra bye na hul korwe teruggekeer het.
 - Kommunikeer met byboere, bure en plaaslike voorligtingsdienste wanneer daar op gewasse wat in die omgewing van ander gewasse wat in blom is toegedien word. Neem spesiale sorg waar bestuiwing benodig word vir vrugteproduksie.
- ▶ Parasitoïede – skadelik
 - Alhoewel **SpinoCide 480 SC** as skadelik beskou word vir parasitoïede, kan 'n vinnige herstel van getalle na toediening waargeneem word.
- ▶ Roofmyte – onskadelik

- Liewenheersbesies (Coccinellidae) – effens skadelik
- Gaasvlerkies (Neuroptera) – effens skadelik
- Sitrus voordelige insekte:
 - *Chilochorus nigrinus* – effens skadelik
 - *Aphytis lingnanensis* – skadelik
 - *Coccidoxenoides peregrinus* – baie skadelik
 - *Trichogrammatoidea cryptophlebiae* – effens skadelik
 - *Euseius citri* – effens skadelik

WERKINGSWYSE:

Spinosad is 'n spinosien (naturaliet) insekdoder (IRAC groep 5) met kontak- en maagaksie. Dit werk deur die insek se senuweestelsel te stimuleer, wat lei tot onwillekeurige spierkontraksies en verlamming. Nikotien-asetielholienreseptor (nAChR) allosteriese modulator – Posisie I.

GEBRUIKSBEPERKINGS

- Moet nie toedien gedurende winderige toestande nie.
- Dien direk op die teikengewas toe en verseker minimale spuitnewel wegdrywing.
- As dit binne twee (2) ure na toediening reën, moet die toediening herhaal word.
- Moet nie in modderige water toedien nie.

GEBRUIKSAANWYSINGS – gebruik slegs soos aangedui

VERENIGBAARHEID:

SpinoCide 480 SC is oor die algemeen verenigbaar met plaagdoders en nie-ioniese byvoegmiddels met verspreidings- en penetrasie-eienskappe. Die verenigbaarheid van **SpinoCide 480 SC** met ander produkte hang af van die formulering van die onderskeie produkte sowel as die kwaliteit van die spuitwater wat gebruik gaan word. Moet nie **SpinoCide 480 SC** in modderige water toedien nie. Dit is moontlik dat formulering van tyd tot tyd kan verander. **Dit word dus aanbeveel, veral wanneer benatters gebruik word, om 'n kleinskaalse fisiese verenigbaarheidstoets (fles toets) gedoen word voordat die tenkmengsel gemaak word deur relatiewe verhoudings van die tenkmengselbestanddele te gebruik.** As blaarvoeding gebruik word, moet die verenigbaarheidstoets met elke lot herhaal word. Raadpleeg altyd die etikette van produkte wat met **SpinoCide 480 SC** in 'n tenk gemeng gaan word.

MENGINSTRUKSIES:

Skud die SpinoCide 480 SC-houer goed voor gebruik. Plaas die dop direk na gebruik terug. 'n Spuitmengsel pH tussen 6.0 en 9.0 word voorgestel om maksimum doeltreffendheid van **SpinoCide 480 SC** te bereik, 'n lae pH-waarde (< pH 6) van die spuitmengsel sal die residuele prestasie verminder. As die waterbron buite hierdie pH-reeks val, of tenkmengsels met ander plaagdoders, adjuvante, of blaarvoedings die pH buite hierdie reeks laat val, oorweeg om die spuitmengsel se pH tussen 6.0 en 9.0 aan te pas voordat **SpinoCide 480 SC** bygevoeg word. Om dit te doen, voeg eers al die ander tenkmengselkomponente by, toets dan die spuitmengsel se pH, pas aan indien nodig, en voeg dan **SpinoCide 480 SC** by.

SpinoCide 480 SC alleen:

Vul die spuittenk met water tot die helfte (½) van die vereiste spuitvolume, begin roer en voeg 'n buffer by indien nodig. Voeg die korrekte hoeveelheid **SpinoCide 480 SC** by die spuittenk terwyl geroer word om 'n homogene emulsie te vorm. Vul die spuittenk met die res van die water terwyl geroer word. Handhaaf voldoende roering tydens toediening om eenvormigheid van die spuitmengsel te verseker.

SpinoCide 480 SC tenkmengsel:

Vul die spuittenk met water tot 'n kwart (¼) van die vereiste spuitvolume. Terwyl die spuittenkwater geroer word, voeg die produkte in die volgende volgorde by – buffer, benatbare poeiers, waterdispergeerbare korrels, **SpinoCide 480 SC** en ander suspensiekonsentrate, emulgeerbare konsentrate, oplosbare konsentrate en laastens benatters/adjuvante. Vul die mengtenk met skoon water tot die vereiste spuitvolume terwyl geroer word. Roer voortdurend en deeglik voor en tydens toediening. Om skuimvorming te voorkom, vermy om lug in die spuitmengsel in te meng. Gebruik die spuitmengsel onmiddellik, moet dit nie vir 'n lang tydperk in die spuittenk bv. oornag, laat nie. Maak alle toerusting deeglik skoon na gebruik en gooi afvalwater weg sonder om die omgewing te besoedel.

TOEDIENING:

Maak seker dat die spuittoerusting korrek gekalibreer is en gaan gereeld na om seker te maak dat die toediening egalig en akkuraat is. Handhaaf voldoende roering tydens toediening om eenvormigheid van die spuitmengsel te verseker. Herhaal die toediening as dit binne twee (2) ure na toediening reën. Holkeël spuitkoppe wat geskik is vir insekdoder-toedienings word aanbeveel. Die volgende aanbevelings word voorsien vir doeltreffende **SpinoCide 480 SC**-toedienings:

Rygewas toedienings:

- Gebruik konvensionele grondspuittoerusting, korrek gekalibreer vir optimale bedekking van die teikengewas.
- Stel spuitbalk en spuitkoppe op vir eweredige bedekking van die teikengewas.
- Sekere toestande mag spuitkoppe op valarms vereis vir eweredige gewasbedekking.
- Volg altyd die vervaardiger se aanbevelings vir ideale spuitkopspasiëring, druk, en spuitbalkhoogte.

Vrugtebome toedienings:

- Gebruik konvensionele boord spuittoerusting, korrek gekalibreer, om optimale bedekking van die teikengewas en akkurate dosis per hektaar te verseker.

➤ **Bladwisselende vrugtebome:**

- Dien **SpinoCide 480 SC** in 'n hoë volume aanwending op bladwisselende vrugtebome toe.
- Bereken die vereiste watervolume (ℓ) per hektaar (ha) nodig vir 'n voldebespuiting volgens die boomry volume (BRV) berekening:

• **BRV (Groenpunt tot +/- 30 % blom)**

$$\ell \text{ water/ha} = [(\text{Boomhoogte} \times \text{Boomdeursnit} \times 937) / \text{Rywydte}] \times 60 \%$$

• **BRV (Vol blom tot +/- middel November)**

$$\ell \text{ water/ha} = [(\text{Boomhoogte} \times \text{Boomdeursnit} \times 937) / \text{Rywydte}] \times 80 \%$$

• **BRV*** (Volblad)

$$\ell \text{ water/ha} = [(\text{Boomhoogte} \times \text{Boomdeursnit} \times 937)/\text{Rywydte}] \times 100\%$$

Gebruik die formule hierbo om die vereiste spuitvolume vir **SpinoCide 480 SC** per hektaar te bereken. Dit is belangrik dat die korrekte hoeveelheid **SpinoCide 480 SC** per hektaar toegedien word.

Die boomhoogte en boomwydte moet gemeet word wanneer die bome in volblad is.

*Boomry Volume (BRV) formule beskryf deur Unrath (Deciduous Fruit Grower Nov. 1986)

➤ **Tafeldruif toedienings:**

- Dien **SpinoCide 480 SC** as 'n hoë volume spuit op tafeldruif toe.
- Bereken die spuitvolume (ℓ) per hektaar (ha) wat vir 'n hoë volume toediening gedurende 'n spesifieke groeistadium benodig word, deur die volgende riglyne te gebruik:

Groeistadium	Voorgestelde Volume vir Hoë Volume Toediening
2,5 cm tot 25 cm lootlengte	500 – 750 ℓ/ha
25 cm lootlengte tot net-voor-blom	750 – 1000 ℓ/ha
Blom tot ertjekorrel stadium	1000 – 1200 ℓ/ha
Ertjekorrel stadium tot oes	1200 – 1500 ℓ/ha

Waarskuwing: Waar gewasse onder skadunet geproduseer word, kan die afbraak van spinosad langer neem, wat die onthoudingsperiodes/residu sal verleng.

ADJUVANTE:

Geregistreerde adjuvante kan gebruik word om die beheer van blaarmyners en blaaspootjies te verbeter in situasies waar dit moeilik is om eweredige plantbedekking te bereik (soos by geslote blaardakke of digte blaarbedekking), of as die vrug/plantoppervlak wat behandel moet word wasagtig of moeilik is om te benat.

TOEDIENINGSTABEL		
GEWAS en PLAAG	DOSIS	OPMERKINGS
AARBEIE Afrika bolwurm (<i>Helicoverpa armigera</i>)	20 mℓ/100 ℓ	<ul style="list-style-type: none"> • Bolwurm: Dien SpinoCide 480 SC as 'n voldekbepuiting toe, verwys na die gebruiksaanwysings (toedieningsaanbevelings). • Begin met toedienings wanneer die infestasiesvlak by of bo die drempelwaarde is. • Nota: As 'n enkel korrektiewe bespuiting is SpinoCide 480 SC meer effektief teen die vroeë instar larwestadium van bolwurm.
Blaaspootjies (Verskeie spesies insluitend Westerse blomblaaspootjies, <i>Frankliniella occidentalis</i>)	15 mℓ/100 ℓ	<ul style="list-style-type: none"> • Blaaspootjies: Dien SpinoCide 480 SC toe as 'n ligte dekbespuiting by die eerste tekens van blaaspootjies en herhaal die toediening na 7 dae indien nodig, verwys na die gebruiksaanwysings (toedieningsaanbevelings). • Gereelde monitering is belangrik om te bepaal wanneer die eerste toediening moet begin. Let daarop dat warm weerstoestande blaaspootjie-aktiwiteit bevorder. <p>Weerstandsbestuur: Moet nie meer as drie (3) keer per gewassiklus toedien nie. Wissel die gebruik van SpinoCide 480 SC af met geregistreerde insekdoders met 'n ander werkingswyse.</p>
AARTAPPELS Aartappelblaarmyner (<i>Liriomyza huidobrensis</i>) Aartappelmot larwe (<i>Phthorimaea operculella</i>)	30 mℓ + 150 – 250 mℓ ligte of medium smal bestek minerale olie OF 'n Geregistreerde benatter teen die geregistreerde dosis vir gebruik op aartappels per 100 ℓ	<ul style="list-style-type: none"> • Dien SpinoCide 480 SC in 'n spuitprogram as 'n voldekbepuiting teen 500 – 1000 ℓ/ha spuitmengsel toe, verwys na die gebruiksaanwysings (toedieningsaanbevelings). • Die spuitmengselvolume wat per hektaar (ha) toegedien moet word, hang van die plantgrootte en blaardigtheid af. Begin met 'n minimum van 500 ℓ/ha spuitmengsel op jong plante en verhoog die volume tot 1000 ℓ/ha soos die plantgrootte toeneem. • Begin met bespuiting by die eerste simptome van besmetting (myne) of dien toe as 'n opvolgtoediening binne 'n spuitprogram na insekdoders vanuit ander chemiese klasse. • Dien 'n minimum van twee (2) opeenvolgende SpinoCide 480 SC toedienings toe om effektiewe plaagbeheer te verseker. Dien elke 7 – 10 dae toe, gebruik die korter interval van 7 dae in die geval van ernstige besmetting, tydens weerstoestande wat die ontwikkeling en verspreiding van die plaag bevoordeel, of wanneer voordelige insekte afwesig is. <p>Weerstandsbestuur: Moet nie meer as vier (4) opeenvolgende toedienings van SpinoCide 480 SC in enige 28-dae tydperk toedien nie. Wissel SpinoCide 480 SC in</p>

		<p>’n spuitprogram met insekdoders vanuit ander chemiesegroeppe, vir die duur van ten minste een generasie van die pes, af.</p> <p>Moet nie SpinoCide 480 SC meer as ses (6) keer per gewassiklus toedien nie.</p> <p>In die geval van aartappelblaarmyner, wissel SpinoCide 480 SC met abamektien-bevattende insekdoders af.</p> <p>Erd die plant rye ten minste twee keer per groeiseisoen op teen aartappelmot.</p>
<p>BLAARSLAAI Afrika bolwurm (<i>Helicoverpa armigera</i>)</p>	<p>20 mℓ (100 – 200 mℓ/ha) + 150 – 250 mℓ ligte of medium smal bestek minerale olie OF ’n Geregistreerde benatter teen die geregistreerde dosis vir gebruik op blaarslaai- per 100 ℓ</p>	<ul style="list-style-type: none"> • Dien SpinoCide 480 SC in ’n spuitprogram as ’n voldekbepuiting teen 500 – 1000 ℓ/ha toe, verseker deeglike benatting van plante, verwys na die gebruiksaanwysings (toedieningsaanbevelings). • Begin met die toediening wanneer bolwurm opgemerk word of dien toe as ’n opvolgtoediening binne ’n spuitprogram na insekdoders van ’n ander groepkode. • Gereelde monitering is belangrik om te bepaal wanneer die eerste toediening moet begin. • Dien ’n minimum van twee (2) opeenvolgende SpinoCide 480 SC bespuitings vir effektiewe plaagbeheer toe. • Dien elke 7 – 10 dae toe, gebruik die korter interval van 7 dae in die geval van hoë getalle of gedurende warm, vogtige weerstoestande wat die ontwikkeling en verspreiding van die bolwurm kan bevoordeel. • Die spuitmengselvolume wat per hektaar (ha) toegedien moet word, hang af van die plantgrootte. Begin met ’n minimum van 500 ℓ/ha spuitmengsel op jong plante en verhoog die volume tot 1000 ℓ/ha soos die plantgrootte toeneem. <p>Weerstandsbestuur: Moet nie meer as vier (4) opeenvolgende toedienings van SpinoCide 480 SC in enige 28-dae tydperk oorskry nie. Wissel SpinoCide 480 SC in ’n spuitprogram met insekdoders van verskillende groepkodes vir ten minste een bolwurm generasie af. Moet nie SpinoCide 480 SC meer as ses (6) keer per gewassiklus toedien nie.</p>
<p>BOLGEWASSE (grasuie, greie en uie) Blaaspootjies (<i>Thrips tabaci</i>)</p>	<p>15 mℓ (75 – 150 mℓ/ha) + 150 – 250 mℓ ligte of medium smal bestek minerale olie OF ’n Geregistreerde benatter teen die geregistreerde dosis vir gebruik op grasuie/preie/ue per 100 ℓ</p>	<ul style="list-style-type: none"> • Dien SpinoCide 480 SC in ’n spuitprogram as ’n voldekbepuiting teen 500 – 1000 ℓ/ha toe, verseker deeglike benatting van plante, verwys na die gebruiksaanwysings (toedieningsaanbevelings). • Begin met die toediening wanneer blaaspootjies opgemerk word of dien toe as ’n opvolgtoediening binne ’n spuitprogram na insekdoders van ’n ander groepkode. • Gereelde monitering is belangrik om te bepaal wanneer die eerste toediening moet begin. Let daarop dat warm weerstoestande blaaspootjie-aktiwiteit bevoordeel. • Dien ’n minimum van twee (2) opeenvolgende SpinoCide 480 SC-bespuitings toe om effektiewe plaagbeheer te verseker. • Dien elke 7 – 10 dae toe, gebruik die korter interval van 7 dae in die geval van hoë populasiedruk of tydens gunstige weerstoestande. • Geringe blaaspootjieskade mag steeds waargeneem word, ten spyte van ’n bestuurprogram. <p>Weerstandsbestuur: Moet nie meer as vier (4) opeenvolgende toedienings van SpinoCide 480 SC in enige 28-dae tydperk oorskry nie. Wissel SpinoCide 480 SC in ’n spuitprogram met insekdoders vanuit verskillende groepkodes af vir een generasie van blaaspootjies. Moet nie SpinoCide 480 SC meer as ses (6) keer per gewassiklus toedien nie.</p>
<p>KERNVRUGTE (appels en pere) Afrika Bolwurm (<i>Helicoverpa armigera</i>)</p>	<p>20 mℓ/100 ℓ</p>	<p>Dien SpinoCide 480 SC as ’n voldekbepuiting toe, verwys na die gebruiksaanwysings (toedieningsaanbevelings). Begin met die toedienings wanneer monitering aandui dat die bolwurm en blaaspootjie populasie tellings by of bo die drempelwaarde is.</p> <ul style="list-style-type: none"> • Bolwurm: Aangewend as ’n enkel korrektiewe toediening, is SpinoCide 480 SC meer effektief teen die vroeë instar larwestadium van bolwurm.

<p>(appels)</p> <p>Blaaspootjies (Verskeie spesies insluitend Westerse blomblaaspootjies, <i>Frankliniella occidentalis</i>)</p>	<p>15 mℓ/100 ℓ</p>	<ul style="list-style-type: none"> • Blaaspootjies: Die kritieke stadium waartydens blaaspootjies geneig is om die meeste skade te veroorsaak, is normaalweg gedurende die vroeë blom tot kort ná blomperiode. • Gereelde monitering gedurende hierdie stadium is belangrik om te bepaal wanneer die eerste toediening moet begin. Let daarop dat warm weerstoestande blaaspootjie-aktiwiteit bevorder. • Afhangend van die duur van die blomperiode en die vlak van infestasië, mag 'n opvolgtoediening binne 7 – 10 dae nodig wees vir voldoende beheer. <p>Weerstandsbestuur: Moet nie meer as vier (4) keer per seisoen toedien nie.</p>
<p>SITRUS Afrika bolwurm (<i>Helicoverpa armigera</i>)</p>	<p>20 mℓ/100 ℓ</p>	<ul style="list-style-type: none"> • Bolwurm: Dien SpinoCide 480 SC as 'n hoë volume voldekbepuiting toe, verwys na die gebruiksaanwysings (toedieningsaanbevelings) • Begin met die toedienings wanneer monitering aandui dat bolwurmtellings by of bo die drempelwaarde is. • Nota: As 'n enkel korrektiewe toediening, is SpinoCide 480 SC meer effektief teen die vroeë instar larwestadium van bolwurm.
<p>Sitrusblaaspootjies (<i>Scirtothrips aurantii</i>)</p>	<p>15 mℓ + 300 mℓ van 'n geregistreerde ligte of medium smal bestek minerale olie per 100 ℓ</p>	<ul style="list-style-type: none"> • Blaaspootjies: Dien SpinoCide 480 SC as 'n ligte tot medium dekbespuiting tot die punt van afloop toe. • Begin met toedienings by 90 % blomblaarval by die eerste tekens van blaaspootjies. Neem kennis dat warm weerstoestande blaaspootjie-aktiwiteit bevorder. • Afhangend van die vlak van infestasië, mag opvolgtoedienings binne 7 – 10 dae nodig wees vir voldoende beheer. <p>Weerstandsbestuur: Moet nie meer as vier (4) keer per seisoen toedien nie. Wissel af met 'n ander klas insekdoder vir weerstandsbestuurdoeleindes.</p>
<p>STEENVRUGTE (kersies, nektariens, perskes, pruime) Afrika bolwurm (<i>Helicoverpa armigera</i>)</p>	<p>20 mℓ/100 ℓ</p>	<ul style="list-style-type: none"> • Dien SpinoCide 480 SC as 'n hoë volume voldekbepuiting toe, verwys na die gebruiksaanwysings (toedieningsaanbevelings). • Begin met toedienings wanneer die infestasiëvlak by of bo die drempelwaarde is. • Nota: As 'n enkel korrektiewe bespuiting, is SpinoCide 480 SC meer effektief teen die vroeë instar larwestadium van bolwurm.
<p>(kersies, nektariens, pruime)</p> <p>Blaaspootjies (Verskeie spesies insluitend Westerse blomblaaspootjies, <i>Frankliniella occidentalis</i>)</p>	<p>15 mℓ/100 ℓ</p>	<ul style="list-style-type: none"> • Die kritieke periode wanneer blaaspootjies geneig is om die meeste skade te veroorsaak, is normaalweg gedurende vroeë blom tot kort na blom. • Gereelde monitering gedurende hierdie periode is belangrik om te bepaal wanneer die eerste toediening gemaak moet word. Let daarop dat warm weerstoestande blaaspootjie-aktiwiteit bevorder. • Afhangend van die duur van die blomperiode en die vlak van besmetting, mag 'n opvolgtoediening binne 7 – 10 dae nodig wees vir voldoende beheer. • Verwys na die gebruiksaanwysings vir toedieningsaanbevelings. <p>Kersies:</p> <ul style="list-style-type: none"> • Dien SpinoCide 480 SC as 'n ligte dekbespuiting toe sodra blaaspootjies opgemerk word. <p>Nektariens:</p> <ul style="list-style-type: none"> • Die kritieke periode waarin blaaspootjies die meeste skade aan nektariens veroorsaak, is normaalweg gedurende vroeë blom tot kort na blom (vroeë skade), maar ook kort voor die oes (versilwering). • Gereelde monitering gedurende hierdie periodes is belangrik om te bepaal wanneer die eerste toediening gemaak moet word. Let daarop dat warm weerstoestande blaaspootjie-aktiwiteit bevorder. <ul style="list-style-type: none"> • Vroeë skade: Dien SpinoCide 480 SC gedurende die blomperiode as 'n hoë-volume voldekbepuiting toe wanneer die blaaspootjie-drempelwaarde bereik word. • Afhangend van die duur van die blomperiode en die vlak van besmetting, mag 'n opvolg toediening binne 7 – 10 dae nodig wees vir voldoende beheer.

		<ul style="list-style-type: none"> • Versilwering: Dien SpinoCide 480 SC as 'n hoë-volume voldekbespuiting toe wanneer die eerste blaaspootjie-aktiwiteit wat verantwoordelik is vir die versilwering, opgemerk word. • Moet nie binne 7 dae voor die oes toedien nie. <p>Pruime:</p> <ul style="list-style-type: none"> • Dien SpinoCide 480 SC gedurende die blomperiode as 'n hoë-volume voldekbespuiting toe, wanneer die blaaspootjie-drempelvlak bereik is, verwys na die gebruiksaanwysings (toedieningsaanbevelings). <p>Weerstandsbestuur: Moet nie meer as vier (4) keer per seisoen op nektariens, perskes en pruime toedien nie, en nie meer as drie (3) keer per seisoen op kersies nie. Bly by die onthoudingsperiodes vir elke gewas.</p>
TAFELDRUIWE Afrika bolwurm <i>(Helicoverpa armigera)</i>	20 mL/100 ℓ	<ul style="list-style-type: none"> • Bolwurm: Dien SpinoCide 480 SC as 'n hoë volume voldekbespuiting toe, verwys na die gebruiksaanwysings (toedieningsaanbevelings). • Begin met toedienings wanneer die infestasielvlak by of bo die drempelwaarde is. • Nota: As 'n enkel korrektiewe bespuiting, is SpinoCide 480 SC meer effektief teen die vroeë instar larwestadium van bolwurm.
Blaaspootjies (Verskeie spesies insluitend Westerse blomblaaspootjies, <i>Frankliniella occidentalis</i>)	15 mL/100 ℓ	<ul style="list-style-type: none"> • Blaaspootjies: Dien SpinoCide 480 SC gedurende die blomperiode as 'n hoë volume voldekbespuiting toe wanneer die blaaspootjie-drempelwaarde bereik word, verwys na die gebruiksaanwysings (toedieningsaanbevelings). • Die kritieke periode waarin blaaspootjies geneig is om die meeste skade te veroorsaak, is normaalweg gedurende vroeë blom tot kort na blom. In sommige gebiede en onder gunstige omstandighede (warm en droë weer), kan blaaspootjies ook later in die seisoen voorkom. • Gereelde monitering is belangrik om te bepaal wanneer die eerste toediening moet begin. • Afhangend van die duur van die blomperiode en die vlak van besmetting, mag 'n opvolgtoediening binne 5 – 7 dae nodig wees vir voldoende beheer. <p>Weerstandsbestuur: Moet nie meer as twee (2) opeenvolgende toedienings in totaal per seisoen toedien nie, hou by die 28 dae onthoudingsperiode.</p>
TAMATIES Amerikaanse blaarmyner <i>(Liriomyza trifolii)</i> Tamatieblaarmyner <i>(Tuta absoluta)</i>	30 mL (150 – 300 mL/ha) + 150 – 250 mL ligte of medium smal bestek minerale olie OF 'n Geregistreerde benatter teen die geregistreerde dosis vir gebruik op tamaties per 100 ℓ	<ul style="list-style-type: none"> • Dien SpinoCide 480 SC in 'n spuitprogram as 'n hoë volume voldekbespuiting teen 500 – 1000 ℓ/ha spuitmengsel toe, verseker deeglike benatting van plante, verwys na die gebruiksaanwysings (toedieningsaanbevelings). • Die volume van die spuitmengsel wat per hektaar (ha) toegedien moet word, hang af van die plantgrootte en die digtheid van die blare. Begin met 'n minimum van 500 ℓ/ha spuitmengsel op jong plante en verhoog die volume tot 1000 ℓ/ha soos die plantgrootte toeneem. • Begin toediening wanneer die blaarmyners eerste waargeneem word of as 'n opvolg toediening binne 'n spuitprogram met insekdoders van ander chemiesegroepe. • Gereelde monitering is belangrik om te bepaal wanneer die eerste toediening gemaak moet word. • SpinoCide 480 SC moet teen 7 – 10 dae intervalle toegedien word. Gebruik die korter interval van 7 dae in die geval van swaar besmettings en gedurende weersomstandighede wat die ontwikkeling en verspreiding van die blaarmyners bevorder. Dien 'n minimum van twee (2) opeenvolgende SpinoCide 480 SC toedienings toe vir doeltreffende beheer. <p>Weerstandsbestuur: Moet nie meer as vier (4) opeenvolgende toedienings van SpinoCide 480 SC in enige 28-dag periode oorskry nie. Wissel SpinoCide 480 SC in 'n spuitprogram af met insekdoders vanuit ander chemiesegroepe vir die duur van ten minste een generasie van die plaag. Moet nie meer as ses (6) keer per gewassiklus toedien nie.</p>