Sien ingeslote voubiljet vir gebruiksaanwysings / See enclosed leaflet for directions for use

MARKSMAN 240 SC

Act/Wet No: 36 of/van 1947
SA Reg No: L10389 / NAM Reg No: N-AR 1884 / BWA Reg No: W1301281

'n Suspensiekonsentraat selektiewe kontak- en maaginsekdoder vir die beheer van sekere insekplae, op gewasse soos gelys

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

AKTIEWE BESTANDDEEL Methoxyfenozide (diasielhidrasien)	**240 g/ℓ**	**ACTIVE INGREDIENT** Methoxyfenozide (diacylhydrazine)
IRAC INSEKDODER GROEP	**18**	**IRAC INSECTICIDE GROUP**

Registrasiehouer / Registration Holder:

Batch Number: SEE
Date of Manufacture: CONTAINER

ICA International Chemicals (Pty) Ltd
Reg. No. 2001/013319/07
PO Box 2312 • STELLENBOSCH • 7601 • SOUTH AFRICA
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Net volume: SEE CONTAINER ℓ

UN No. 3082

Group III

SANB-MT003-003

Marksman 240 SC

SA Reg No: L10389 / NAM Reg No: N-AR 1884 / BWA Reg No: W1301281
Act 36 of 1947

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

ACTIVE INGREDIENT

Methoxyfenozide (diacylhydrazine)..... 240 g/ℓ

REGISTERED BY:
ICA International Chemicals (Pty) Ltd.
Reg. No. 2001/013319/07
28 PLANKEN STREET, PLANKENBRUG INDUSTRIAL ♦ STELLENBOSCH ♦ 7600 ♦ South Africa

CAUTION

WARNINGS

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

- Apples ..... 10 Days
- Avocados ..... 30 Days
- Citrus ..... 30 Days
- Pears ..... 10 Days
- Pomegranate ..... 14 Days
- Stone fruit ..... 7 Days
- Tree nuts (macadamia, pecans, almonds, pistachio and hazel nuts) ..... 14 Days

Compliance with withholding periods will ensure that residues do not exceed local maximum residue limits (MRL) but may not meet the import requirements of other countries. 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 **MARKSMAN 240 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. **MARKSMAN 240 SC** must be tested on new cultivars prior to usage over big areas.

- Keep out of reach of children, uninformed persons and animals.
- Handle with care.
- May be harmful if in contact with skin.
- May be harmful if inhaled.
- Keep away from food, drink and animal feeding stuff.
- Toxic to aquatic life with long lasting effects.
- Store in cool, dry and well-ventilated area away from direct sunlight.
- **Re-entry interval:** Do not enter treated area for one day after application, 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 disease against the remedy concerned as well as by the method, time and accuracy of application. The registration holder furthermore does not accept responsibility for damage to crops, 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

- Read label before use.
- Do not handle until all safety precautions have been read and understood.
- Store in a well-ventilated place. Keep container tightly closed.
- If inhaled: Call a poison center/doctor if you feel unwell.
- Wash thoroughly after handling.
- Take off contaminated clothing and wash it before re-use.
- Prevent contamination of food, eating utensils, feed and drinking water.
- Collect spillage.
- Use only outdoors or in a well ventilated area.
- Wear protective gloves/face protection/protective clothing.
- Prevent spray or mist drifting onto other crops, grazing, rivers, dams and other areas not under treatment.
- Avoid release to the environment.
- Clean all equipment thoroughly after use and dispose of waste water without polluting the environment.
- Dispose of container and contents in accordance with local/national regulations.
- 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. Offer container for recycling or puncture and dispose of at authorised landfill. Do not use container for any other purpose

FIRST AID TREATMENT

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

INGESTION:	· DO NOT induce vomiting. · Rinse mouth with water. Have person sip a glass of water if able to swallow. · PREVENT vomit from entering lungs. · Get medical advice if feeling unwell or worried.
INHALATION:	· Treat symptomatically. Remove patient from source of exposure and move to fresh air. · Get medical advice if feeling unwell or worried.
EYES:	· Treat symptomatically. Remove any contact lenses. Rinse eyes immediately with plenty of clean water for at least 15 minutes. Hold eyelids apart while flushing. · Seek medical help if irritation continue.
SKIN:	· Treat symptomatically. Remove contaminated clothing and take a shower. · Rinse affected areas (skin) immediately with plenty of water. · If skin irritation occurs: Get medical attention/advice
NOTE TO PHYSICAN:	· Treat symptomatically.
POTENTIAL HEALTH AFFECTS:	· No significant adverse effects expected.

RESISTANCE WARNING

For resistance management purposes, **MARKSMAN 240 SC** is an IRAC group code (18) diacylhydrazine insecticide. Any insect population may contain individuals naturally resistant to **MARKSMAN 240 SC** and other Group 18 insecticides. If these insecticides are used repeatedly, the resistant individuals may eventually dominate the pest insect population. These resistant insects may not be controlled by **MARKSMAN 240 SC** or by other Group 18 insecticides. For further information on resistance management and advice on IRM programmes contact your local distributor.

It is recognised that resistance of insects and mites to insecticides and acaricides can also result from enhanced metabolism, reduced penetration or behavioural changes that are not linked to groupings. Alteration with compounds from different chemical classes is an anti-resistance management technique.

To delay insecticide resistance:

- Avoid the exclusive repeated use of insecticides from the same chemical subgroup.
- Do not use less than recommended label rates of any insecticides.
- Target applications preferably against early instar larvae and eggs of the pest whenever possible.
- Include proven cultural and biological control practices within an Integrated Pest Management Programme.
- **MARKSMAN 240 SC** should be applied when field scouting indicates that the population density of target pests has reached the economic threshold as described under recommendations.
- If **MARKSMAN 240 SC** is tank mixed with an insecticide that reduces the selectivity in preserving beneficial predatory insects, then the full benefit of **MARKSMAN 240 SC** to the integrated pest management program may decrease.

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 **MARKSMAN 240 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.

It is best to apply **MARKSMAN 240 SC** preventively. The best positioning of **MARKSMAN 240 SC** applications are at the beginning of peak moth flight, before egg hatch where degree day models are followed (e.g. Codling Moth) or before egg hatch of peak moth flights. This will ensure that the majority of eggs are laid on the treated surfaces and the emerging larvae are exposed to **MARKSMAN 240 SC** before any damage is caused.

MODE OF ACTION:

MARKSMAN 240 SC is a moulting acceleration product and is effective mainly upon ingestion up to L2 larval stages for the control of Codling Moth (*Cydia pomonella*) with minimal contact effect on the eggs. Methoxyfenozide mimics the activity of the moulting hormone of lepidopterous larvae in the L1-L2 stages, and is different from other insect growth regulators such as chitin-biosynthesis-inhibitors or juvenile-hormone mimic products. Following ingestion, the larval stages of the order Lepidoptera undergo an incomplete and lethal premature moult. After ingestion, larvae cease feeding within 4-8 hours and subsequently die, as a result of their inability to feed and complete the moulting process.

*The mode of action of the active ingredient Methoxyfenozide therefore requires thorough spray coverage of the plant surface with **MARKSMAN 240 SC**.*

INTEGRATED PEST MANAGEMENT (IPM) PROGRAMME:

MARKSMAN 240 SC can be recommended for IPM programmes in crops. **MARKSMAN 240 SC** should be applied as preventative sprays when field scouting and/or monitoring indexes indicates that the target pest will reach economic thresholds. The best positioning of **MARKSMAN 240 SC** applications are at the beginning of peak moth flight or before egg hatch where degree day models are followed (e.g. Codling Moth) or before egg hatch of peak moth flights. This will ensure that the majority of eggs are laid on treated surfaces and emerging larvae are exposed to **MARKSMAN 240 SC** before any damage is caused.

MARKSMAN 240 SC is a selective insecticide and only controls the larval stage of insects of the Lepidoptera group. **MARKSMAN 240 SC** used under good agricultural practice (GAP), does not have a significant impact on certain parasitic or predaceous insects and mites, including ladybirds, lacewings, assassin bugs, predatory mites, etc.

Effects on beneficial organisms:

Bees and young bees – relatively harmless
Parasitoids-relatively harmless
Predatory insects and mites-relatively harmless

DIRECTIONS FOR USE
(Use only as directed)

COMPATIBILITY:
MARKSMAN 240 SC compatibility with other agricultural chemicals can be influenced by factors such as dilution water quality and product formulations. It is therefore recommended to always first perform a physical compatibility test (jar test) prior to application. **MARKSMAN 240 SC** is generally compatible with other crop protection chemicals.

pH: MARKSMAN 240 SC is stable in a water suspension with a pH of 4-9.

MIXING INSTRUCTIONS:
Pour the correct quantity of **MARKSMAN 240 SC** to half of the required water in the spray tank while agitating to form a homogenous emulsion. Fill the spray tank with rest of the water while agitating. When preparing a tank mixture: while agitating the spray tank water, add the products to ½ of the water in the following sequence - wettable powders, water dispersible granules, **MARKSMAN 240 SC** and other suspension concentrates**,** and emulsifying concentrates last. Top up the mixing tank with the required quantity of clean water whilst agitating. Agitate constantly before and during application. Use the spray mixture immediately, do not leave in spray tank for a length of time, e.g. overnight.

ADJUVANT:
Use with registered adjuvants if the fruit/product surface to be treated is waxy or difficult to wet.

APPLICATION TABLE

CROP and DISEASE	DOSAGE per 100 ℓ water	REMARKS
AVOCADOS **False Codling Moth** (*Thaumatotibia leucotreta*)	60 mℓ **Marksman 240 SC**	1. Apply **Marksman 240 SC** as a high volume application. 2. Apply **Marksman 240 SC** at 8 and 4 weeks prior to harvest or when False Codling Moth infestations are expected to occur. Resistance management: For resistance management, **Marksman 240 SC** should not be applied in total more than three (3) times per season. Alternate with registered insecticides with a different mode of action.
CITRUS **False Codling Moth** (*Thaumatotibia leucotreta*)	60 mℓ **Marksman 240 SC**	1. Apply as a high volume full cover spray. 2. Apply **Marksman 240 SC** 8 and 4 weeks prior to harvest. Resistance management: Do not apply **Marksman 240 SC** more than two (2) times per season. Use registered insecticides with a different mode of action for further control measures.
POME FRUIT Apples and Pears **Codling Moth** *(Cydia pomonella)*	60 mℓ **Marksman 240 SC**	1. Apply as a high volume full cover spray. Preferably use the tree row volume (**TRV**) calculation below. 2. First application of **Marksman 240 SC** at the beginning of a moth generation, or in the case of the first generation, at ¾ petal fall. Repeat after 14 days. Resistance management: For resistance management, **Marksman 240 SC** should not be applied in total more than two (2) times per season. Use in a spray program with other registered products with different modes of action. **Marksman 240 SC** can be used on any generation of codling moth. The positioning of **Marksman 240 SC** in a spray program will be determined by the control strategy followed. As a guide, **Marksman 240 SC** can be considered for the control of the 2nd generation. If **Marksman 240 SC** is used to control the last generation in a season, products with a different mode of action must be used for the control of the first generation the following season.
Water volume (ℓ) per hectare required for full cover spray using tree row volume (TRV) calculation: Tree height and diameter to be measured in summer when trees are in full flush • **TRV** (Bud Break to Full Blossom) ℓ water/ha = [(Tree Height X Tree Diameter X 937)/Row Width] X 60 % • **TRV** (75 % Petal Fall to One Month Later - Mid Season) ℓ water/ha = [(Tree Height X Tree Diameter X 937)/Row Width] X 80 % • **TRV** (Mid Season to Post Harvest, Before Leaf Drop)) ℓ water/ha = (Tree Height X Tree Diameter X 937)/Row Width Use the water volume per hectare to calculate the required amount of **Marksman 240 SC** required per hectare. It is important that the correct amount of **Marksman 240 SC** per hectare is applied.		
POMEGRANATES **False Codling Moth** (*Thaumatotibia leucotreta*)	60 mℓ **Marksman 240 SC**	1. Apply as a high volume full cover application, using the TRV calculation below 2. Use recognized monitoring practices to determine presence of pest 3. Apply **Marksman 240 SC** at the beginning of peak moth flight or before maximum egg laying is expected. 4. Apply a follow-up application 14 days later if necessary. 5. Do not apply **Marksman 240 SC** more than two (2) times per season. Resistance management: Use registered insecticides with a different mode of action in the spray programme. If **Marksman 240 SC** is used to control the last generation in a season, products with a different mode of action must be used for the control of the first generation the following season.

Water volume (ℓ) per hectare required for full cover spray using tree row volume (TRV) calculation:
Tree height and diameter to be measured in summer when trees are in full flush

- TRV (Up to +/- 30 % blossom)
  ℓ water/ha = [(Tree Height X Tree Diameter X 937)/Row Width] X 60 %
- TRV (Full blossom to +/- middle November)
  ℓ water/ha = [(Tree Height X Tree Diameter X 937)/Row Width] X 80 %
- TRV (Full leaf)
  ℓ water/ha = (Tree Height X Tree Diameter X 937)/Row Width

Use the water volume per hectare to calculate the required amount of Marksman 240 SC per hectare, depending on the various growth stages. It is important that the correct amount of **Marksman 240 SC** per hectare is applied.

STONE FRUIT **False Codling Moth** (*Thaumatotibia leucotreta*)	60 mℓ **Marksman 240 SC**	1. Apply as a high volume full cover spray. 2. Use recognized monitoring practices to determine presence of False Codling Moth. 3. Apply **Marksman 240 SC** at the beginning of peak moth flight or before maximum egg laying is expected. 1. Apply a follow-up application 14 days later if necessary. 2. **Marksman 240 SC** should not be applied in total more than two (2) times per season. Resistance management: Use in a spray program with other registered products with different modes of action. The positioning of **Marksman 240 SC** in a spray program will be determined by the control strategy followed. If Marksman **240 SC** is used to control the last generation in a season, products with a different mode of action must be used for the control of the first generation the following season.
TREE NUTS (Macadamia, Pecan, Almonds, Pistachio and Hazelnuts) **False Codling Moth** (*Thaumatotibia leucotreta*)	60 mℓ **Marksman 240 SC**	1. Apply **Marksman 240 SC** as a high volume application. 2. Start first application in susceptible period, usually beginning of November to end of December. 3. Use recognized monitoring practices to determine presence of False Codling Moth. Resistance management: For resistance management, **Marksman 240 SC** should not be applied in total more than three (3) times per season. Use registered insecticides with a different mode of action for further control measures. If Marksman **240 SC** is used to control the last generation in a season, a products with a different mode of action must be used for the control of the first generation the following season.

[a] Only use registered products as registered in spray programmes

Marksman 240 SC

SA Reg No: L10389 / NAM Reg No: N-AR 1884 / BWA Reg No: W1301281
Wet 36 van 1947

'n Suspensiekonsentraat selektiewe kontak- en maaginsekdoder vir die beheer van insekplae in gewasse soos aangedui.

AKTIEWE BESTANDDEEL

Methoxyfenozide (diasielhidrasien) ..... 240 g/ℓ

GEREGISTREER DEUR:
ICA International Chemicals (Pty) Ltd.
Reg. Nr. 2001/013319/07
PLANKENSTRAAT 28, PLANKENBRUG INDUSTRIEËL ♦ STELLENBOSCH ♦ 7600 ♦ Suid-Afrika

VERSIGTIG

WAARSKUWINGS

Onthoudingsperiodes (Minimum aantal dae tussen laaste toediening en oes):

- Appels ..... 10 Dae
- Avokado's ..... 30 Dae
- Granate ..... 14 Dae
- Neutboomgewasse (makadamia-, pekan-, amandel, pistachio- en haselneute) ..... 14 Dae
- Pere ..... 10 Dae
- Steenvrugte ..... 7 Dae
- Sitrus ..... 30 Dae

Nakoming van hierdie onthoudingsperiodes sal verseker dat die plaaslike maksimum residu limiete (MRL) nie oorskry word nie, maar mag dalk nie voldoen aan die invoervereistes van ander lande nie. Indien die gewas wat behandel gaan word, bestem is vir uitvoer, skakel met die betrokke invoerder of uitvoerliggaam rakende die gebruik van hierdie produk, die MRL en aanbevole onthoudingsperiodes. Alhoewel **MARKSMAN 240 SC** as gewasveilig beskou word op die meeste belangrike kultivars, beteken dit nie dat 'n meer sensitiewe kultivar in die toekoms op die mark kan kom nie. Nuwe kultivars moet nie in groot areas behandel word voordat **MARKSMAN 240 SC** daarop getoets is nie.

- Hou buite bereik van kinders, oningeligde persone en diere.
- Hanteer versigtig.
- Mag skadelik wees indien in kontak met vel.
- Mag skadelik wees deur inaseming.
- Hou weg van voedsel, drink water en voer.
- Toksies vir akwatiese organismes, met langtermyn gevolge.
- Berg in koel, droë, wel belugte area en weg van direkte sonlig.
- **Herbetredingsinterval:** Moet nie behandelde gebied binnegaan vir een dag na behandeling 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 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.

VOORSORGMAATREËLS

- Lees etiket voor gebruik.
- Moenie hanteer voordat alle veiligheids voorsorgmaatreëls gelees en verstaan is nie.
- Stoor in 'n goed geventileerde area, in 'n toe houer.
- Indien ingeasem: Kontak 'n gifsentrum / dokter indien u ongesteld voel.
- Was deeglik na hantering.
- Verwyder gekontamineerde klere en was dit voor hergebruik.
- Voorkom besoedeling van voedsel, eetgerei, drinkwater en voer.
- Versamel indien gemors.
- Gebruik slegs buite of in 'n goed geventileerde area.
- Dra beskermende handskoene/ gesigskerm/beskermende oorklere.
- Voorkom wegdrywing van die sproeinewel na ander gewasse, weiding, riviere, damme en ander gebiede wat nie behandel word nie.
- Voorkom vrystelling aan die omgewing.
- Maak alle apparaat deeglik skoon na gebruik en gooi afvalwater weg waar dit nie die omgewing sal besoedel nie.
- Raak ontslae van die houer en inhoud in ooreenstemming met die plaaslike / nasionale regulasies
- Sodra houer leeg is, keer om oor spuittenk of mengbak en dreineer vir minstens 30 sekondes totdat vloei tot gedrup verminder het. Spoel leë houer daarna drie keer uit met 'n volume water gelykstaande aan minstens 30 % van die houer. Gooi die spoelwater by die inhoud van die spuittenk voordat die houer vernietig word, deur gate daarin te maak. Bied houer aan vir hersirkulasie of neem na 'n amptelike vullis area. Moenie die houer vir enige ander doel gebruik nie.

NOODHULP BEHANDELING

Ingeval van 'n ongeluk of as u onwel voel, verkry mediese hulp dadelik (wys etiket indien moontlik).

INGESLUK:	• MOENIE braking induseer nie. • Spoel mond uit met water. Laat persoon 'n bietjie water drink indien dit moontlik is om te sluk. • VOORKOM dat braaksel in longe kom. • Verkry mediese advies indien ongesteld voel of bekommerd.
INASEMING:	• Behandel simptomaties. Verwyder pasient van bron van blootstelling na vars lug. • Kry mediese advies indien ongesteld voel of bekommerd.
Oë:	• Behandel simptomaties. Verwyder enige kontaklense. Spoel oë dadelik met skoon water vir ten minste 15 min. Hou ooglede van mekaar terwyl gespoel word. • Verkry mediese hulp indien oog-irritasie aanhou.
VEL:	• Behandel simptomaties. Verwyder besmette klere en neem 'n stort. • Spoel ge-affekteerde area (vel) dadelik met genoegsame water. • Indien daar vel irritasie voorkom: Kry mediese raad/aandag.
NOTA AAN DOKTER	• Behandel simptomaties
POTENSIËLE GESONHEIDS EFFEKTE:	• Geen beduidende nadelige nagevolge verwag nie.

WEERSTANDSWAARSKUWING

Vir weerstandbestuur, **MARKSMAN 240 SC** is 'n diasielhidrasien (Weerstands Aksie Kommitee groepkode 18) insekdoder. Enige insekpopulasie mag individue met 'n natuurlike weerstand teen **MARKSMAN 240 SC** of ander insekdoders binne dieselfde chemiese groep insluit. Indien **MARKSMAN 240 SC**, of insekdoders van dieselfde chemiese groep, herhaaldelik oor lang periodes, of teen opeenvolgende generasies van insekte aangewend word, sal die weerstandbiedende individue uiteindelik oorheersend in die populasie voorkom. Hierdie weerstandbiedende insekte sal nie deur **MARKSMAN 240 SC**, of ander insekdoders binne dieselfde chemiese groep, beheer word nie. Plaaslike kundiges moet oor 'n weerstandstrategie of oor aanbevelings in die verband geraadpleeg word.

Dit is bekend dat weerstand van myte en insekte teen mytdoders en insekdoders ook kan ontstaan as gevolg van verhoogde metabolisme, verlaagde penetrasie of veranderde gedragspatroon. Hierdie tipe weerstand hou nie verband met enige werkingswyse-klassifikasie nie, maar sal spesifiek wees tot 'n bepaalde middel of chemiese groepering. Afwisseling met verbindings tussen verskillende chemiese groepe is 'n anti-weerstand bestuur tegniek.

Om weerstand teen insekdoders te vertraag:

- Vermy die eksklusiewe herhaaldelike gebruik van insekdoders van dieselfde chemiese groep kode.
- Moenie insekdoders teen 'n laer dosis, as wat op hierdie etiket voorgeskryf word, aanwend nie
- Rig toedienings verkieslik en waar enigsins moontlik, teen die jonger larwale –of die eierstadium van 'n betrokke plaag.
- Sluit ander beheermaatreëls (chemies, verbouiing, biologies) in insekdoderprogramme in.
- **MARKSMAN 240 SC** moet toegedien word wanneer die veld erkende verkenningsmetodes aantoon dat die bevolkingsdigtheid van teiken plae die ekonomiese drempelwaarde bereik soos beskryf onder aanbevelings.
- Indien **MARKSMAN 240 SC** met ander insekdoders gemeng word, wat die selektiwiteit van **MARKSMAN 240 SC** ten opsigte van die voordelige insekte benadeel, sal die voordeel van **MARKSMAN 240 SC** in die geïntegreerde plaagbestuurprogram nie ten volle benut kan word nie.

Vir spesifieke inligting oor weerstandsbestuur, kontak die registrasiehouer van hierdie produk. Aangesien die voorkoms van weerstand nie voorspel kan word nie, word gebruikers aangeraai om behandelde gewasse onder streng observasie te hou. Indien die behandeling nie doeltreffend is nie as gevolg van die gebruik van **MARKSMAN 240 SC** soos aanbeveel, mag 'n weerstandbiedende ras teenwoordig wees. As 'n weerstandbiedende ras positief geïdentifiseer word, moet oorweging daaraan geskenk word om die vinnige gebruik van 'n insekdoder met 'n ander modus van aksie, waarvoor daar geen rekord van weerstand teen die betrokke insekdoder is nie.

MARKSMAN 240 SC moet eerder as voorkomende bespuiting aangewend word. Veral waar die voorkoms van plae gemonitor word en toedienings eers oorweeg word wanneer daar verwag word dat die ekonomiese drumpelwaarde vir die plaag op die betrokke gewas bereik of oorskry gaan word. Waar gebruik gemaak word van daggrade modelle (bv. Kodlingmot) is die beste stadium om **MARKSMAN 240 SC** te plaas aan die begin van mot piek vlugte of net voordat maksimum eierlegging verwag word. Dit sal verseker dat die meeste eiers op behandelde oppervlak gelê word en pas uitgebroeide larwes aan **MARKSMAN 240 SC** blootgestel word, voordat enige skade gedoen kan word.

WERKINGSWYSE:

MARKSMAN 240 SC is 'n vervellingsversnellingsmiddel en is hoofsaaklik op die inname tot L2 larwale stadiums vir die beheer van Kodlingmot (*Cydia pomonella*), met geringe kontakwerking op die eiers. Methoxyfenozide mimiek die vervellingshormoon van lepidoptera larwes in die L1-L2 stadiums. Die uitwerking op larwes is vinnig en verskil van ander insek - groeireguleerders soos chitien-biosintese-inhibeerders of jonghormoon-mimiek-middels. Die versnelde vervellingsproses begin feitlik onmiddelik na inname, en larwes hou binne 4-8 ure na inname op met voed. Die larwes vrek deurdat hul vermoë om te voed belemmer word, en hul nie die vervellingsproses kan voltooi nie.

*Die werkingswyse van die aktiewe bestandeel methoxyfenozide vereis 'n deeglike bedekking van die plantoppervlak met **MARKSMAN 240 SC.***

GEÏNTEGREERDE PLAAGBESTUURSPROGRAM (GPB):

MARKSMAN 240 SC kan in GPB programme van gewasse aanbeveel word. **MARKSMAN 240 SC** moet eerder as voorkomende bespuiting aangewend word, veral waar die voorkoms van plae gemonitor word en toedienings eers oorweeg word wanneer verwag word dat die ekonomiese drumpelwaarde vir die plaag op die betrokke gewas bereik of oorskry gaan word. Waar gebruik gemaak word van daggrade modelle (bv. Kodlingmot) is die beste stadium om **MARKSMAN 240 SC** te plaas aan die begin van mot piek vlugte of net voordat maksimum eierlegging verwag word. Dit sal verseker dat die meeste eiers op behandelde oppervlak gelê word en pas uitgebroeide larwes aan **MARKSMAN 240 SC** blootgestel word, voordat enige skade gedoen kan word.
MARKSMAN 240 SC is 'n selektiewe insekdoder en beheer slegs die larwale stadium van insekte van die Lepidoptera groep. Wanneer **MARKSMAN 240 SC**, binne goeie landbou praktyk aangewend word, het dit geen beduidende nadelige invloed op parasitiese en predatoriese insekte en roofmyte soos skilpadkewers, goudogies, roofwantse, predatoriese myte, ens. nie.

Uitwerking daarvan op voordelige organismes:

Bye en jong bye - relatief skadeloos
Parasiete- relatief skadeloos
Predatoriese insekte en myte- relatief skadeloos

GEBRUIKSAANWYSINGS
(Gebruik slegs soos aangedui)

VERENIGBAARHEID:

Hoewel **MARKSMAN 240 SC** verenigbaar is met meeste landbouchemiesemiddels word 'n fisiese mengbaarheidstoets (fles toets) altyd aanbeveel voor gebruik aangesien mengbaarheid beïnvloed word deur faktore soos verdunningswatergehalte en produkformulering. **MARKSMAN 240 SC** is oor die algemeen verenigbaar met ander gewasbeskermings chemikalieë.

pH: MARKSMAN 240 SC is stabiel in 'n watersuspensie met 'n pH van 4-9

MENGINSTRUKSIES:

Maak mengtenk halfvol met skoon water en voeg die korrekte hoeveelheid **MARKSMAN 240 SC** by terwyl dit geroer word om 'n homogene emulsie te vorm. Vul die spuittenk met die res van die water terwyl dit geroer word. By die voorbereiding van 'n tenkmengsel: Voeg die produkte by ½ van die water in die volgende volgorde - benatbare poeiers, water oplosbare korrels, **MARKSMAN 240 SC** en ander suspensie konsentrate en laastens emulsifiseerde konsentrate. Vul mengtenk met skoon water tot by verlangde vlak terwyl voortdurend geroer word. Roer mengsel deeglik voor en tydens toediening. Aangemaakte spuitmengsels moenie in spuittenk gelaat word vir onbepaalde tyd, bv. oornag, nie.

ADJUVANT:

Gebruik van 'n geregistreerde benattingsmiddel teen die geregistreerde dosis word aanbeveel indien vrugte/produk wasagtig of moeilik benatbaar is.

TOEDIENINGSTABEL

GEWAS en SIEKTE	DOSIS per 100 ℓ water	OPMERKINGS
AVOKADO'S **Vals Kodlingmot** (*Thaumatotibia leucotreta*)	60 mℓ **Marksman 240 SC**	1. Dien **Marksman 240 SC** toe as 'n hoë volume toediening. 2. Dien **Marksman 240 SC** toe tydens 8 en 4 weke voor oes, of wanneer Vals Kodlingmot infestasies verwag word. Weerstandstrategie: Moenie **Marksman 240 SC** meer as drie (3) maal per seisoen toedien nie. Wissel die gebruik van **Marksman 240 SC** af met insekdoders met 'n ander werkswyse.
GRANATE **Vals Kodlingmot** (*Thaumatotibia leucotreta*)	60 mℓ **Marksman 240 SC**	1. Dien **Marksman 240 SC** toe as 'n hoë volume toediening, deur gebruik te maak van BRV berekening onder. 2. Gebruik erkende moniteringspraktyke om teenwoordigheid van plaag te bepaal. 3. Dien **Marksman 240 SC** toe by die eerste waarneming van 'n mot vlug piek of net voordat maksimum eierlegging verwag word 4. Indien nodig, dien 'n opvolg behandeling 14 dae later toe. 5. Moenie **Marksman 240 SC** meer as twee (2) maal per seisoen toedien nie. Weerstandstrategie: Wissel die gebruik van **Marksman 240 SC** af met insekdoders met 'n ander werkswyse. Indien **Marksman 240 SC** vir die beheer van die laaste generasie van die seisoen aangewend word, moet 'n middel met 'n ander werkswyse vir die beheer van die eerste generasie in die daaropvolgende seisoen gebruik word.
Water volume (ℓ) per hektaar benodig vir voldekbespuiting volgens boomry volume (BRV) berekening: Boomhoogte en boomwydte moet gedurende die somer, wanneer bome in volblad is, bepaal word. • **BRV** (Tot +/- 30 % blom) ℓ water/ha = [(Boomhoogte X Boomdeursnit X 937)/Rywydte] X 60 % • **BRV** (Volblom tot +/- middel November) ℓ water/ha = [(Boomhoogte X Boomdeursnit X 937)/ Rywydte] X 80 % • **BRV** (Volle Blad) ℓ water/ha = (Boomhoogte X Boomdeursnit X 937)/ Rywydte Gebruik die water volume per hektaar om die hoeveelheid **Marksman 240 SC** per hektaar benodig, te bepaal. Dit is belangrik dat die korrekte hoeveelheid **Marksman 240 SC** per hektaar toegedien word.		
KERNVRUGTE (Appels en Pere) **Kodlingmot** (*Cydia pomonella*)	60 mℓ **Marksman 240 SC**	1. Dien toe as 'n hoë volume voldekbespuiting. Die gebruik van boomry volume (**BRV**) berekening soos onder aangegee word aanbeveel. 2. Toedienings van **Marksman 240 SC** moet aan die begin van 'n mot generasie, of in die geval van die eerste generasie, by ¾ blomblaarval in aanvang neem. Herhaal toediening na 14 dae. Weerstandstrategie: Moenie **Marksman 240 SC** meer as twee (2) maal per seisoen toedien nie. Gebruik **Marksman 240 SC** in 'n program met geregistreerde insekdoders met 'n ander werkingswyse. Alhoewel **Marksman 240 SC** op enige generasie van Kodlingmot aangewend kan word, sal die posisionering van **Marksman 240 SC** in 'n spuitprogram bepaal word deur die spesifieke beheerstrategie wat gevolg word. Alhoewel nie noodwendig nie, kan dit oorweeg word om **Marksman 240 SC** gedurende die tweede generasie toe te dien. Indien **Marksman 240 SC** vir die beheer van die laaste generasie van die seisoen aangewend word, moet 'n middel met 'n ander werkswyse vir die beheer van die eerste generasie in die daaropvolgende seisoen gebruik word.

Water volume (ℓ) per hektaar benodig vir voldekbespuiting volgens boomry volume (BRV) berekening:
Boomhoogte en Boomwydte moet gedurende die somer, wanneer bome in volblad is, bepaal word.

- **BRV** (Groenpunt tot Volblom)
  ℓ water/ha = [(Boomhoogte X Boomdeursnit X 937)/Rywydte] X 60 %
- **BRV** (75 % Blomblaarval tot Een Maand Later - Midseisoen)
  ℓ water/ha = [(Boomhoogte X Boomdeursnit X 937)/ Rywydte] X 80 %
- **BRV** (Midseisoen tot ná-oes, Voor Blaarval)
  ℓ water/ha = (Boomhoogte X Boomdeursnit X 937)/ Rywydte

Gebruik die water volume per hektaar om die hoeveelheid **Marksman 240 SC** per hektaar benodig, te bepaal. Dit is belangrik dat die korrekte hoeveelheid **Marksman 240 SC** per hektaar toegedien word.

NEUTBOOMGEWASSE (Makadamia-, Pekan-, Amandel-, Pistachio en Haselneute) **Vals Kodlingmot** (*Thaumatotibia leucotreta*)	60 mℓ **Marksman 240 SC**	1. Dien **Marksman 240 SC** toe as 'n hoë volume toediening. 2. Begin met toedienings wanneer gewasse vatbaar is, gewoonlik vanaf begin November tot aan die einde van Desember. 3. Gebruik erkende moniteringspraktyke om teenwoordigheid van plaag te bepaal. Weerstandstrategie: Moenie **Marksman 240 SC** meer as drie (3) maal per seisoen toedien nie. Gebruik insekdoders met 'n ander werkingswyse as verdere beheer benodig word. Indien **Marksman 240 SC** vir die beheer van die laaste generasie van die seisoen aangewend word, moet 'n middel met 'n ander werkswyse vir die beheer van die eerste generasie in die daaropvolgende seisoen gebruik word.
SITRUS **Vals Kodlingmot** (*Thaumatotibia leucotreta*)	60 mℓ **Marksman 240 SC**	1. Dien toe as 'n hoë volume, volle dekbespuiting 2. Dien **Marksman 240 SC** toe 8 en 4 weke voor oes. Weerstandstrategie: Moenie **Marksman 240 SC** meer as twee (2) maal per seisoen op sitrus toedien nie. Gebruik insekdoders met 'n ander werkingswyse as verdere beheer benodig word
STEENVRUGTE **Vals Kodlingmot** (*Thaumatotibia leucotreta*)	60 mℓ **Marksman 240 SC**	1. Dien **Marksman 240 SC** toe as 'n hoë volume toediening. 2. Gebruik erkende moniteringspraktyke om teenwoordigheid van plaag te bepaal. 3. Dien **Marksman 240 SC** toe by die eerste waarneming van 'n mot vlug piek of net voordat maksimum eierlegging verwag word. 4. Dien 'n opvolg behandeling 14 dae later toe indien nodig 5. Moenie **Marksman 240 SC** meer as twee (2) keer per seisoen toedien nie. Weerstandstrategie:.Gebruik **Marksman 240 SC** in 'n program met geregistreerde insekdoders met 'n ander werkswyse. Indien **Marksman 240 SC** vir die beheer van die laaste generasie van die seisoen aangewend word, moet 'n middel met 'n ander werkswyse vir die beheer van die eerste generasie in die daaropvolgende seisoen gebruik word.

[a] Gebruik slegs geregistreerde produkte in spuitprogram