



DEVGUARD[®] 500SC

REG. No. / Nr. L8883: ACT No. /WET Nr. 36 of/van 1947

A suspension concentrate contact nematicide for protection of tubers and roots against nematodes in the crops listed.

'n Suspensiekonsentraat kontak aalwurmdoder vir die beskerming van knolle en wortels teen aalwurms in die genoemde gewasse.

Active Ingredient:

Iprodione (dicarboxamide)..... 500g/l

Aktiewe bestanddeel

..... Iprodioon (dikarboxamied)

NET VOLUME

ℓ

NETTO VOLUME

Manufactured & formulated by / Vervaardig & geformuleer deur:

Devgen NV

B9052 Gent-Zwijnaarde, Belgium

Registered by / Geregistreer deur:

Devgen NV

Represented by / Verteenwoordig deur:

Disa BioTechnologies cc (Reg no. 1999/47619/23)

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Distributed by / Versprei deur:

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Batch number

Date of Manufacture

UN number

3082

Lot nommer

Datum vervaardig

UN nommer

Group III



**CAUTION
VERSIGTIG**



DEVGUARD[®] is the registered trademark of / is die geregistreerde handelsmerk van Devgen NV, Belgium

WARNINGS

The following withholding periods must be observed between the last application and harvest potatoes **28 days**

- Harmful when absorbed through the skin or swallowed or inhaled.
- Toxic to fish and harmful to wildlife.
- Store in original container in a cool dry place away from food and feed.
- Keep out of the reach of children, uninformed persons and animals.
- Re-entry interval: Do not enter treated area during application unless wearing rubber boots. Do not handle treated soil unless wearing rubber gloves.
- **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 therefore may be affected by factors such as: abnormal soil, climatic and storage conditions, 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, the environment or harm to man or animal or for lack of performance of the remedy concerned due to failure of the user to follow the label instructions or to the occurrence of conditions which could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.**

PRECAUTIONS

- Avoid inhalation of the spray mist.
- Wear rubber gloves and face shield when handling the concentrate.
- Wash with soap and cold water after use.
- Do not eat, drink or smoke during application or before washing hands and face.
- Prevent the contamination of food, feeds, eating utensils and drinking water.
- Clean applicator/mixing tank after use or before using with other remedies. Dispose of wash water where it will not contaminate crops, grazing, rivers and dams.
- Invert the empty container over the spray tank and allow to drain until the flow has slowed down to a drip. Thereafter rinse the empty container three times with water equal to 10% of that of the container and add the rinsing to the contents of the spray tank before destroying the empty container by perforation and flattening and never use for any other purpose.
- Prevent contamination of springs, dams and rivers.

RESISTANCE WARNING

To delay pesticide resistance:

- Avoid exclusive repeated use of pesticides from the same pesticide group code. Alternate or tank mix with products from different pesticide group codes.
- Integrate the control methods (chemical, cultural, biological) into pest control programmes.

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

DIRECTIONS FOR USE: USE ONLY AS DIRECTED

MODE OF ACTION - IMPORTANT

Protecting the formation and growth of roots is a priority and application programmes should be targeted accordingly. Ensure that the product is correctly placed and evenly distributed by correct incorporation in the soil.

DEVGUARD®500SC WORKS BY CONTACT ACTION. IT IS EFFECTIVE ON THE MOBILE STAGES OF THE NEMATODE WHILE THEY ARE ACTIVE IN THE SOIL. EGGS IN THE SOIL AND LARVAE THAT HAVE ALREADY PENETRATED THE ROOTS WILL NOT BE CONTROLLED. THE PRODUCT WILL ONLY PROVIDE PROTECTION FOR THE TUBERS AND ROOTS WITHIN THE TREATED ZONE.

MOISTURE IS ESSENTIAL TO FACILITATE THE DISTRIBUTION AND DISPERSION OF DEVGUARD®500SC IN THE SOIL THAT SHOULD BE MOIST PRIOR TO APPLICATION AND MUST BE FOLLOWED THE SAME DAY BY IRRIGATION (20 - 25 mm).

ACCELERATED MICROBIAL DEGRADATION

This phenomenon can affect all soil-applied compounds. To minimize the possibility of accelerated microbial degradation from occurring, avoid long-term repeated applications of the same product / group of compounds.

GENERAL NOTES:

1. Always plant certified nematode-free seed or plants.
2. Use only accurate and properly calibrated application equipment.
3. The required quantity of product should be mixed and immediately added to the spray tank or mixing vessel (for irrigation equipment) and applied without delay.
4. The spray or irrigation water should ideally be a pH around 6.5 – 7 otherwise it should be buffered to this level.
5. Mixing instructions: Half fill the mixing tank with clean water, start agitation, add the required quantity of **DEVGUARD®500SC** and fill up with water while maintaining agitation throughout mixing and application. If required, the buffering agent should be added to the water before **DEVGUARD®500SC**.
6. Do not mix **DEVGUARD®500SC** with any other product or fertilizer.
7. Do not leave the product to stand in the spray / mixing tank and certainly never overnight.
8. **Pre plant application:** Apply as an overall broadcast spray to the soil before planting (up to approximately 7 days) in 300 – 400 ℓ water/ha and ensure thorough incorporation by mechanical means with an off-set tandem disc or a rotorvator operating at a maximum speed of 8kph to a depth of at least 15cm – the ideal depth is between 15 to 25cm. There should always be a treated layer of soil below the planting depth to ensure that roots and tubers are adequately protected. Do not disturb the soil once **DEVGUARD®500SC** has been applied and incorporated otherwise untreated soil will be re-introduced to the root/tuber zone.
Avoid over-irrigation and possible wash-off in sandy soils.
Irrigation alone will not incorporate DEVGUARD®500SC sufficiently to the recommended depth.
9. **Nematode infestation:** Avoid the use of **DEVGUARD®500SC** in soils where nematode pressure can be extremely high.
10. **Soil pH:** **DEVGUARD®500SC** can be used in soils where the pH ranges between 5 and 9. Do not use in soils outside this range.

RECOMMENDATIONS

CROP/PEST	DOSAGE RATE	REMARKS
POTATOES (Table potatoes only) For soils with >10% clay Nematodes <i>Meloidogyne</i> species excluding <i>M.chitwoodi</i>	12 ℓ/ha (See notes)	Apply before planting as an overall soil treatment in 300-400 ℓwater/ha using a tractor mounted boom spray and incorporate mechanically with an offset tandem disk or rotorvator (preferably in two directions) to a depth of 15 – 25cm before making the planting furrow to ensure even distribution. <u>In the following areas specific precautions must be taken to protect crops due to the heightened risk of serious nematode infestations:</u> Northern Cape, North West Province and Western Cape (Sandveld) – sandy soils with crops under irrigation;- <u>Winter plantings:</u> the soil must be fumigated prior to planting. <u>Summer plantings:</u> the soil must be fumigated prior to planting and application of DEVGUARD®500SC followed by a supplementary foliar applied nematicide programme using other registered nematicides.

NOTES:

- Soil moisture levels should be close to field capacity when **DEVGUARD®500SC** is applied and incorporated. Irrigation (20 - 25 mm) after application and mechanical incorporation is also essential to supplement mixing with and incorporation into the soil.
- Crops planted in historically susceptible areas and growing in hot conditions (specifically summer plantings) on very sandy soils, under centre pivot irrigation and where nematicides have shown variable performance are significantly more at risk of high levels of damage. It is advised that under such conditions additional precautions are taken in the form of a soil fumigation prior to applying **DEVGUARD®500SC**. A combination of soil sterilization, soil treatment and further soil or foliar applied treatments should be considered as a necessity.
- Do not disturb the soil after planting otherwise the protective barrier layer of **DEVGUARD®500SC** may be broken.
- The lower part of the root system and/or lower tubers may show nematode damage in cases of insufficient incorporation / moisture or where applications, soil, climatic and cropping conditions are not optimal.
- **DO NOT USE DEVGUARD®500SC** in crops intended for SEED AND CHIPPING POTATOES that need to be free from any nematode damage.
- A single application of **DEVGUARD®500SC** in potatoes, when applied according to recommendations and in light infestations, should protect tubers and roots against nematode attack up to 75 days. The length of activity is influenced by many factors and can vary considerably due to local conditions.

- Potatoes left in the ground for > 100 days will be susceptible to attack by nematodes and will show symptoms of damage. Lift potatoes as soon as the crop potential has been reached, as late infestation can occur and rapidly infest and damage the tubers. Potatoes are particularly vulnerable to attack once the haulms have been slashed/burnt off as soil temperatures are likely to increase due to the lack of cover - this may stimulate the nematode life cycle resulting in a rapid multiplication and infestation of the tubers. If it is intended to keep the potatoes in the ground for a period longer than 100 days, a complementary preventive nematicide treatment is compulsory. A single application of **DEVGUARD[®] 500SC** at planting should be followed by a foliar treatment programme.

WAARSKUWINGS

Die volgende onthoudingsperiodes moet toegepas word tussen die laaste toediening en oes van die aartappels, tamaties **28 dae**.

- Skadelik wanneer dit deur die vel geabsorbeer word, gesluk of ingesem word.
- Giftig vir vis en skadelik vir wild.
- Bêre in oorspronklike houer en berg in 'n koel droë plek, weg van voedsel en voer.
- Hou buite bereik van kinders, diere en oningeligte persone.
- Herbetreding: Dra rubberskoene/ stewels in die behandelde gebied tydens toediening. Rubber handskoene moet ook gedra word wanneer daar met die behandelde grond gewerk 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, verenigbaarheid met ander stowwe 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 effek op mens of dier of vir gebrek aan prestasie as gevolg van die versuim van die gebruiker om etiketaanwysings na te kom of as gevolg van die ontstaan van toestande wat nie kragtens die registrasie voorsien kon word nie. Raadpleeg die verskaffer onmiddelik in die geval van enige onsekerheid.**

VOORSORGMAATREELS

- Moenie die spuitmiddel inasem nie.
- Rubber handskoene en gesigmasker moet gedra word wanneer met die konsentraat gewerk word.
- Was met seep en koue water na gebruik.
- Moenie eet, drink of rook tydens die toedieningsproses of voordat gesig en hande gewas is nie.
- Voorkom die besoedeling van voedsel, voer, eetgerei en drinkwater.
- Maak die mengtenk skoon na gebruik en voordat dit vir ander middels gebruik word. Raak ontslae van uitspoel water in 'n omgewing waar dit nie skade aan gewasse, weiding, riviere of damme kan veroorsaak nie.
- Keer die leë houer om oor die besproeiings tenk, laat die inhoud dreineer totdat die vloeï tot 'n gedrup verminder het. Spoel daarna die leë houer drie keer met 'n volume water gelykstaande aan minstens een tiende van die houer en voeg die uitspoelsels by die inhoud van die spuittenk/ mengbak voordat die houer op die voorgeskrewe manier vernietig word deur gate in te slaan en plat te kap. Dit mag nooit weer gebruik word vir enige ander doeleindes nie.
- Voorkom besoedeling van fonteine, damme en riviere.

WEERSTANDWAARSKUWING

Om plaagdoders se weerstand te vertraag:

- Vermyn die eksklusiewe herhaaldelike gebruik van plaagdoders met dieselfde groepkodes. Wissel af met, of gebruik tenkmengsels van produkte in verskillende plaagdodergroepkodes.
- Integreer die beheer metodes (chemies, kultureel, biologies) in die bestrydings programme.

Vir spesifieke inligting oor die teenstand bestuur kontak die registrasie houer of die verspreider van die produk.

GEBRUIKSAANWYSINGS - GEBRUIK SLEGS SOOS AANGEDUI

MANIER VAN WERKING- BELANGRIK

Beskerming van die formasie en groei van wortels is 'n prioriteit. Toedieningsprogramme moet dus oorstemmend geteiken word. Korrekte plasing en egalige vermengings van die produk in die grond in die teikengebied is dus noodsaaklik.

DEVGUARD® 500SC WERK DEUR KONTAK-AKSIE. DIT IS EFFEKTIEF TYDENS DIE BEWEEGLIKE STADIA VAN DIE AALWURMS TERWYL HULLE AKTIEF IN DIE GROND IS. EIERS IN DIE GROND EN LARWES WAT ALREEDS DIE WORTELS BINNEGEDRING HET, SAL NIE BEHEER WORD NIE. DIE PRODUK SAL SLEGS BESKERMING BIED VIR DIE KNOLLE EN WORTELS WAT BINNE DIE BEHANDELDE GEBIED VOORKOM. VOG IS NOODSAAKLIK VIR DIE VESPREIDING VAN DEVGUARD® 500SC. DIE GROND MOET KLAM WEES VOOR DIE TOEDIENING VAN DEVGUARD® 500SC EN MOET OP DIESELFDE DAG OPGEVOLG WORD DEUR BESPROEÏING (20 - 25 MM).

VERSNELDE MIKROBIESE AFBRAAK

Hierdie verskynsel kan alle grondtoegediende produkte affekteer. Om die voorkoms van moontlike versnelde mikrobiële afbraak uit te skakel, moet langdurige herhaalde toedienings van dieselfde produk/ groep chemiese verbindings vermy word.

ALGEMENE NOTAS:

1. Plant alleenlik aalwurm-vry gesertifiseerde saad of plante.
2. Maak net gebruik van akkuraat en goed gekalibreerde toedieningsapparaat.
3. Die aanbeveelde hoeveelheid van die produk moet gemeng word en onmiddelik gevoeg word tot die besproeiingstenk of mengapparaat (vir besproeiings doeleindes) en onmiddelik toegedien word sonder vertraging.
4. Die besproeiings water hoort verkieslik 'n pH van 6.5- 7 te hê. Indien nodig, moet dit tot op hierdie vlak aangepas word.
5. Meng instruksies: Maak die mengbak halfvol met skoon water, begin die roering, voeg die benodigde hoeveelheid **DEVGUARD® 500SC** by en vul met water terwyl roering volgehou word tydens die vermenging en toediening. Indien nodig moet die bufferingsagent by die water gevoeg word **VOOR DEVGUARD® 500SC**.
6. Moenie **DEVGUARD® 500SC** met enige ander produk of kunsmis meng nie.
7. Moenie die produk in die spuit- of mengtenk laat oorstaan nie - beslis **NOOIT** oornag nie.
8. **Toediening voor plant:** Aanwending as 'n algehele breëwerpige spuit vir die grond voor planting (tot ongeveer 7 dae) in 300 – 400 l water/ha. Verseker deeglike vermenging deur meganiese wyse met of 'n tweekrigtingsdis of 'n roltand implement (rotorvator) wat teen 'n maksimum spoed van 8kpu tot 'n diepte van tenminste 15cm – die ideale diepte is 15 -25cm. Daar hoort altyd 'n behandelde laag grond onder die plantingsdiepte te wees om te verseker dat die wortels en knolle genoegsaam beskerm word. Moenie die grond versteur nadat **DEVGUARD® 500SC** toegedien is en ingekorporeer is nie, anders sal die wortels en knolle aan die onbehandelde grond blootgestel word. Vermo oorbeproeïing en moontlike afspoel in sanderige grond. **Besproeiings alleenlik sal nie DEVGUARD® 500SC genoemsaam in die grond inkorporeer tot die aanbeveelde diepte nie.**
9. **Infestering deur Aalwurms:** Vermo die gebruik van **DEVGUARD® 500SC** in grond waar aalwurm druk baie hoog kan wees.
10. **Grond pH:** **DEVGUARD® 500SC** kan in grond gebruik word waar die pH vlak tussen 5 en 9 is. Moenie in grond gebruik buite hierdie vlak nie..

AANBEVELINGS

GEWAS/ PLAAG	TOEDIENINGS-HOEVEELHEDE	OPMERKINGS
AARTAPPELS (Slegs Tafelaartappels) In grond met >10% klei Aalwurms <i>Meloidogyne</i> spesies uitsluitende <i>M.chitwoodi</i>	12 l/ha (Verwys na notas)	Dien toe voor plant as 'n eweredige voldek grond behandeling in 300-400 l water/ha. Gebruik 'n trekker gemonteerde spuitbalk en verseker meganiese inmenging met 'n tweerigtingdis of 'n roltandimplement (rotovator) – (verkieslik in 2 rigtings) tot 'n diepte van 15 – 25cm vir egalige verspeiding voordat die riwwe vir plant getrek is. <u>In die volgende omgewings moet spesifieke voorkomingsmaatreëls geneem word om die gewas te beskerm a.g.v verhoogde risiko van infestering deur aalwurms:</u> Noord- Kaap, Noord- Wes Provinsie en Wes- Kaap (Sandveld) – sanderige grond met gewasse onder besproeiings: <u>Winter aanplantings:</u> Die grond <u>moet berook word</u> voor plant. <u>Somer aanplantings:</u> Die grond <u>moet berook word</u> voor plant en toediening met DEVGUARD® 500SC gevolg deur 'n komplimentêre blaarbespuiting met 'n toepaslike geregistreerde aalwurmdoder in 'n program met ander geregistreerde aalwurmdoders.

NOTAS:

- Grondvog vlakke moet naby aan veldkapasiteit wees wanneer **DEVGUARD® 500SC** toegedien en ingewerk word. Besproeiing (20 - 25 mm) na toediening en meganiese inwerking / vermenging is ook noodsaaklik om die vermenging en verspreiding in die grond te bevorder.
- Gewasse wat in historiese vatbare areas en hoë temperature (spesifiek somer aanplantings) op baie sanderige grond geplant word, onder spilpuntbesproeiing en waar aalwurmdoders wisselvallige uitwerking gehad het, is daar 'n potensiale risiko van hoë vlakke van skade. In sulke omstandighede word dit aanbeveel dat addisionele voorsorgmaatreëls getref word en dat die land **berook** word voor die toediening van **DEVGUARD® 500SC**. 'n Kombinasie van grondsterilisering, grond behandeling en verdere grond- of blaar bespuiting moet oorweeg word as 'n noodsaaklikheid.
- Moenie die grond versteur na planting nie, anders sal die beskermende laag wat deur **DEVGUARD® 500SC** gevorm is tot skade ly.
- Die onderste gedeelte van die wortelsisteem en / of onderste knolle mag aalwurmskade toon in gevalle van onvoldoende inwerking/ vog of waar toediening, grond, klimaats- en verbouingstoestand nie optimaal is nie.
- MOENIE **DEVGUARD® 500SC** gebruik in gewasse wat bedoel is vir SAAD EN SKYFIE AARTAPPELS nie:- hul hoort vry van enige aalwurmskade te wees.
- 'n Enkele behandeling met **DEVGUARD® 500SC** in aartappels, toegedien volgens aanbevelings en in gevalle van ligte infestering, hoort die wortels en gewasse teen aalwurmanval tot 75 dae beskerm

te wees. Die lengte van aktiwiteit word beïnvloed deur vele faktore en kan wissel a.g.v plaaslike omstandighede.

- Aartappels wat langer as 100 dae in die grond lê is blootgestel aan aalwurm en simptome van skade mag voorkom. Aartappels moet uitgehaal word sodra dit fisiologies rypheid bereik (oesgereed) het, aangesien die aartappels/ gewasse deur 'n laat infestering beskadig kan word. Aartappels is meer vatbaar vir aanval deur aalwurms na die lowwe afgesny / afgebrand is vanweë stygende grondtemperatuur a.g.v die verlies aan loofbedekking. Dit sal weer tot gevolg hê dat die eiers uitbroei en die lewensiklus van die aalwurms versnel. Indien aartappels vir 'n langer tydperk as 100 dae in die grond gehou word, is 'n komplementêre voorkomende aalwurm behandeling noodsaaklik. 'n Enkel toediening met **DEVGUARD® 500SC** tydens planting hoort gevolg te word met 'n blaarbespuiting program.