



SHARDA CARBOSULFAN 400 SC

Reg. No. L 8954, Act No. 36 of 1947 | Reg. Nr. L 8954, Wet Nr. 36 van 1947

A systemic contact and stomach insecticide and nematicide for the control of certain pests on cotton, maize and grapevines.

'n Sistemiese kontak en maag insek - en aalwurmdoder vir die beheer van sekere plaë op katoen, mielies en wingerd.

INSECTICIDE GROUP CODE 1A

ACTIVE INGREDIENT

Carbosulfan (carbamate) - 400 g/ℓ

Registration Holder | Registrasiehouer
Sharda International Africa (PTY) LTD
Reg. No./Reg. Nr. 2010/002268/07
P. O. Box/Posbus 82021, Southdale, 2135
Tel: 031-764 3011
Tel: 087-822 2397

INSEKDODERGROEPKODE 1A

AKTIEWE BESTANDEDEEL

Karbosulfan (karbamaat) - 400 g/ℓ

BATCH NO. LOT NR.	
EXPIRY DATE VERVAL DATUM	

Net Volume /
Netto Volume

1ℓ

UN No. 2992



TOXIC



WARNINGS

Withholding Period: Do not apply to grapes within 84 days of harvest.

- Do not allow livestock to graze on treated plants within 12 weeks of treatment.
- Handle with extreme care.
- Poisonous when absorbed through the skin, swallowed or inhaled.
- Toxic to bees, fish and wildlife.
- Store under lock and key in a well ventilated cool place protected from sunlight and rain.
- Keep out of reach of children, uninformed persons and animals.
- Under certain climatic conditions the application of "Sharda Carbosulfan 400 SC" may cause a delay in maize emergence and this may be associated with temporary yellowing or scorching of the leaves.
- Crop Sensitivity: "Sharda Carbosulfan 400 SC" has been tested on a number of crop varieties without causing any phytotoxicity. It is possible that new crop varieties may show sensitivity to this product. It is recommended that "Sharda Carbosulfan 400 SC" be tested on new crop varieties on a small scale before large scale plantings are done.
- Re-entry Interval: Do not enter the treated area within 2 days after application unless wearing protective clothing.
- Aerial Application: Notify all inhabitants in the immediate vicinity of the area to be sprayed and issue the necessary warnings. Do not spray over or allow drift to contaminate water or adjacent areas.

Although this insecticide 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 soil, climatic and storage conditions; quality of dilution / application water; compatibility with other substances not indicated on the label and the occurrence of resistance of the pest against the insecticide 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 insecticide 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

- Wear protective clothing (overall, face shield, gloves, boots) when mixing and spraying this product.
- Wash hands and face with soap and water after use and accidental skin contact.
- Do not eat or drink or smoke during application or before washing hands and face.
- Prevent drift of spray mist onto other crops, grazing, rivers, dams and areas not under treatment.
- Prevent contamination of food, feedstuffs, drinking water and eating utensils.
- Clean the applicator after use and dispose of wash water where it will not contaminate crops, grazing, rivers and dams.
- Invert the empty container over the spray or mixing tank and allow to drain for at least 30 seconds after the flow has slowed to a drip. Thereafter rinse the empty container three times with a volume of water equal to at least one tenth of that of the container and add the rinsing water to the contents of the spray tank before disposing of the container in the prescribed manner.
- Destroy the empty container by perforation and flattening and do not use for any other purpose.

Resistance Management: For resistance management, "Sharda Carbosulfan 400 SC" is a group code 1A insecticide. Any insect population may contain individuals naturally resistant to "Sharda Carbosulfan 400 SC" and other group code 1A insecticides. The resistant individuals can eventually dominate the insect population if these insecticides are used repeatedly and consecutively. These resistant insects may not be controlled by "Sharda Carbosulfan 400 SC" or any other group code 1A insecticides.

To delay insecticide resistance: Avoid exclusive repeated and consecutive use of insecticides from the same insecticide group code. Alternate with products from different insecticide group codes. Integrate with other control methods (chemical, cultural, biological) into insect control programs. For specific information on resistance management contact the registration holder of this product.

SYMPTOMS OF HUMAN POISONING

Headache, fatigue, faintness, giddiness, excessive sweating, nausea, abdominal pain, vomiting, muscle twitching, small pupils, respiratory distress, coma.

FIRST AID TREATMENT

Remove the patient from the source of poisoning and keep him/her quiet and reassured.
Skin contact: Remove contaminated clothing. Wash contaminated skin with plenty of soap and cold water. Do not rub skin. If irritation persists get medical attention.
Eye contact: Rinse eyes with clean water for at least 15 minutes. Get medical attention.
Ingestion: If swallowed, get medical attention immediately. Do not induce vomiting.

NOTE TO PHYSICIAN

The active ingredient is a reversible cholinesterase inhibitor. Administer atropine sulphate at 2 to 4mg intravenously and repeat at 10 minute intervals until atropinisation appears.
Do not use oximes such as PAM-2.
If in the eye, apply one drop of homotropine.

AERIAL APPLICATION

Aerial application of "Sharda Carbosulfan 400 SC" may only be done by a registered Aerial Application Operator using a correctly calibrated, registered aircraft according to the instructions of SABS Code 10118 (Aerial Application of Agricultural Pesticides). Ensure that the spray mixture is distributed evenly over the target area and that the loss of spray material during application is restricted to a minimum. It is therefore essential that the following criteria be met:

- Volume: A spray mixture volume of 30ℓ per hectare is recommended. As this product has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy, or be held responsible for any adverse effects if this product is applied aerially at a lower volume rate than recommended above.
- Droplet coverage: 30 to 40 droplets per cm² must be recovered on the target area.
- Droplet size: A droplet spectrum with a VMD of 250 to 280 microns is recommended. Limit the

production of fine droplets of less than 150 microns (high drift and evaporation potential) to a minimum.

- Flying height: Maintain the height of the spray boom at 3 to 4 metres above the target. Do not spray when aircraft dives, is in a climb or when banking
- Use suitable atomising equipment that will produce the desired droplet size and coverage, but which will ensure the minimum loss of product. The spraying system must produce a droplet spectrum with the lowest possible relative span.
- Position all the atomisers within the inner 60 to 75 % of the wingspan to prevent droplets from entering the wingtip vortices.
- The difference in temperature between the wet and dry bulb thermometers, of a whirling hygrometer, should not exceed 8°C.
- Stop spraying if the wind speed exceeds 15 km/h.
- Stop spraying under turbulent, unstable and dry conditions during the heat of the day.
- Spraying under temperature inversion conditions (spraying in or above the inversion layer) and/or high humidity conditions (relative humidity 80 % and above) may lead to the following:
 - reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage).
 - damage to other sensitive crops and/or non-target areas through drifting of the suspended spray cloud away from the target field.
- Ensure that the Aerial Spray Operator knows exactly which fields to spray.
- Obtain an assurance from the Aerial Spray Operator that the above requirements will be met and that relevant data will be compiled in a logbook and kept for future reference.

DIRECTIONS FOR USE

Ensure that spray equipment is clean and correctly calibrated before applying "Sharda Carbosulfan 400 SC".

Clean spray equipment thoroughly after use.

Mixing – Mix the required quantity of "Sharda Carbosulfan 400 SC" with the same quantity of water; half fill the spray tank with water; add the spray mix to the water; fill the spray tank to the required volume. The mixture should be agitated continuously during mixing and spraying. Do not allow the spray mix to stand for any length of time.

USE ONLY AS DIRECTED**Maize – Preventative Treatment at Planting**

When using a tractor mounted spray at planting, spray "Sharda Carbosulfan 400 SC" as a 5 cm band into the open planting furrow after seed placement but before furrow closure. It is recommended to angle the spray nozzles backwards so that the spray is just before the press wheel and some soil will have covered the seed when the spray mix is applied.

Use low pressure spray equipment.

The volume of spray mix should be a minimum of 450 mℓ per 100 m furrow row.

MAIZE / PESTS	DOSAGE RATE	REMARKS
Black maize beetle (<i>Heteronychus arator</i>)	60 mℓ per 100 m plant row	Apply in not less than 400 mℓ water per 100 m. This treatment will control stalkborer for up to 6 weeks.
False wire worms (<i>Tenebrionidae</i> species) Ground weevils (<i>Protostrophus</i> species) Leafhopper (Streak virus vector) (<i>Cicadulina mbila</i>) Nematodes	48 mℓ per 100 m plant row	Apply in not less than 400 mℓ water per 100 m. This treatment will not control black maize beetle and stalkborer.

Maize – Corrective Ground Weevil Treatment After Crop Emergence

Apply "Sharda Carbosulfan 400 SC" when the first sign of weevil damage on seedlings is seen. Spray a 30 cm band over the maize row. Use 2.0ℓ of spray mix per 100 m row to obtain good spray cover.

MAIZE / PESTS	DOSAGE RATE	REMARKS
Ground weevils (<i>Protostrophus</i> species)	10 mℓ per 100 m row	Apply in not less than 2.0 ℓ water per 100 m. Ground weevils will only be controlled after feeding on treated plants. Therefore limited insect damage will occur to young plants after application.

Cotton – Aphid Control

Apply "Sharda Carbosulfan 400 SC" as a full foliar cover spray with ground spray equipment or in a minimum of 30ℓ per ha with aerial spray equipment.

COTTON / PEST	DOSAGE RATE	REMARKS
Cotton aphid (<i>Aphis gossypii</i>)	Plants up to 60 cm high: 600 mℓ/ha Plants over 60 cm high: 900 mℓ/ha	Commence when aphids and/or their honeydew is observed.

Grapevines – Mite Control

Apply in spring when mites are moving to new growth.

GRAPEVINES / PEST	DOSAGE RATE	REMARKS
Budmite (<i>Colomerus vitis</i>) Erinose mite (<i>Eriophyes vitis</i>)	60 mℓ per 100 ℓ water	Apply three sprays. Apply the first spray when shoots are 5 to 10 cm long. Repeat the spray at 14 day intervals.

WAARSKUWINGS

Onthoudingsperiode: Moet nie binne 84 dae voor oes van druiwe toedien nie.

- Moet nie toelaat dat lewendehawe behandelde plante binne 12 weke na behandeling bewei nie.
- Hanteer uiters versigtig.
- Giftig wanneer ingeneem, ingesam of deur die vel geabsorbeer word.
- Giftig vir bye, visse en wild.
- Bêre agter slot en grendel in 'n goed belugte koel plek wat teen son en reën beskerm is.
- Hou buite die bereik van kinders, oningeligte persone en diere.
- Onder sekere klimaatstoestande mag 'n toediening van "Sharda Carbosulfan 400 SC" 'n vertraging in die opkoms van mielieplante tot gevolg hê en wat met tydelike vergelying en skroei van die blare gepaard gaan.
- Gewasgevoeligheid: "Sharda Carbosulfan 400 SC" is op 'n aantal gewasvariëteite sonder enige fitotoksiteit getoets. Dit is moontlik dat nuwe gewasvariëteite vir hierdie produk gevoelig mag wees. Dit word aanbeveel dat "Sharda Carbosulfan 400 SC" op nuwe gewasvariëteite op 'n klein skaal getoets word voordat grootskaalse aanplantings geplant word.
- Herbetreding: Moet nie die behandelde gebied betree vir 2 dae na die bespuiting nie, tensy beskermende oorklere gedra word.
- Lugtoediening: Stel alle inwoners in die onmiddellike omgewing van die gebied wat bespuit gaan word in kennis en reik die nodige waarskuwings uit. Moet nie oor aangrensende gebiede of water spuit of toelaat dat spuitnewel dit besoedel nie.

Alhoewel hierdie insekdoder 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 stowwe wat nie op die etiket aangedui is nie en die voorkoms van weerstand van die plaag teen die betrokke insekdoder 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 'n gebrek aan prestasie van die betrokke insekdoder as gevolg van die versuim van die gebruiker om etiketaanwysings na te kom of as gevolg van die ontstaan van toestande wat nie kragsdanks die registrasie voorsien kon word nie. Raadpleeg die verskaffer in die geval van enige onsekerheid.

VOORSORGMATREËLS

- Dra beskermende klere (oorkap, gesigskerm, handskoene, stewels) tydens meng en toediening van hierdie produk.
- Was hande en gesig met seep en water na gebruik en toevallige vel kontak.
- Moet nie eet, drink of rook tydens toediening of voordat hande en gesig gewas is nie.
- Voorkom wegdrywing van spuitnewel na ander gewasse, weiding, riviere, damme en areas nie onder behandeling nie.
- Voorkom besoedeling van voedsel, voer, drinkwater en eetgerei.
- Maak spuitapparaat skoon na gebruik en raak ontslae van uitspoelwater waar dit nie gewasse, weiding, riviere en damme kan besoedel nie.
- Keer die lê houder om oor die spuitteknik of mengbak en dreineer vir minstens 30 sekondes nadat die vloeitot 'n gedrupte verminder het. Spoel die lê houder daarna drie keer uit met 'n volume water gelyk aan ten minste 10% van die van die houder en voeg die uitspoelwater by die inhoud van die spuitteknik voordat van die houder op die voorgeskrewe metode vernietig word.
- Vernietig lê houder deur gate in te maak en plat te slaan. Moet vir geen ander doel weer gebruik nie.

Weerstandbestuur: "Sharda Carbosulfan 400 SC" is 'n groepkode 1A insekdoder. Enige populasie van 'n spesifieke insek spesie mag individue insluit wat 'n natuurlike weerstand teen "Sharda Carbosulfan 400 SC" of enige ander groepkode 1A insekdoder het. Indien hierdie insekdoders herhaaldelik aangewend word kan die weerstandbiedende individue uiteindelik die insekpopulasie oorheers. Hierdie weerstandbiedende insekte sal waarskynlik nie deur "Sharda Carbosulfan 400 SC" of enige ander groepkode 1A insekdoder beheer word nie.

Om weerstand teen insekdoders te vertraag: Vermoed eksklusiewe en herhaaldelike gebruik van insekdoders in dieselfde insekdoder groepkode. Wissel af met produkte in verskillende insekdoder groepkodes.

Integreer ander beheermaatreëls (chemies, verbouing, biologies) in insekbeheer programme.

Vir spesifieke inligting oor weerstandbestuur kontak die registrasiehouer van hierdie produk.

SIMPTOME VAN VERGIFTIGING

Hoofpyn, vermoeidheid, floute, duiseligheid, oormatige sweet, mislikheid, maagpyn, braking, belemmerde gesigsvermoë, spiersamtrekkings, verkleinde pupille, asemhalingsnood, bewusteloosheid.

NOODHULPBEHANDELING

Verwyder die pasiënt van die bron van vergiftiging en stel hom/haar gerus en hou stil.

Vel kontak: Verwyder besoedelde klere. Was besmette vel met baie seep en koue water. Moet nie die vel hard wrywe nie. Indien irritasie aanhou, verkry mediese behandeling.

Oog kontak: Spoel oë met skoon water vir ten minste 15 minute uit. Verkry mediese behandeling.

Inname: Indien ingesluk, ontbid 'n geneesheer onmiddellik. Moet nie braking induuseer nie.

NOTA AAN GENESHEER

Die aktiewe bestanddeel is 'n omkeerbare cholinesterase inhibeerder. Dien atropiensulfaat teen 2 tot 4 mg binnears toe. Herhaal elke 10 minute totdat atropinisasie intree.

Moet nie oksime soos PAM-2 gebruik nie.

Indien in die oog, plaas 'n druppel homotropien in die oog.

LUGTOEDIENING

"Sharda Carbosulfan 400 SC" kan slegs deur 'n geregisteerde Lugbespuitingsoperateur met 'n korrek gekalibreerde, geregistreerde vliegtuig volgens die instruksies van SABS Kode 10118 (Aerial Application of Agricultural Pesticides) uit die lug bespuit word. Verseker dat die spuitmengsel eweredig oor die teikenarea versprei word, en die verlies aan spuitmengsel tydens toediening 'n minimum beperk word. Dit is daarom belangrik om aan die volgende vereistes te voldoen:

- Volume: 'n Spuitmengsel volume van 30ℓ per ha word aanbeveel. Hierdie produk is nie teen 'n verlaagde volume getoets nie. Die registrasiehouer kan nie effektiwiteit waarborg, of verantwoordelik gehou word vir enige nadelige effekte indien hierdie produk teen 'n laer volume, as hierbo aanbeveel, toegedien word nie.
- Druppelbedekking: 30 tot 40 druppels per cm² moet op die teikenarea herwin word.
- Druppelgrootte: 'n Druppelspektrum met 'n VMD van 250 tot 280 mikrons word aanbeveel. Beperk die produksie van druppels kleiner as 150 mikrons (hoë drywing en verdampingspotensiaal) tot 'n minimum.
- Vlieghoogte: Handhaaf die hoogte van die spuitbalk bo die teiken op 3 tot 4 meter. Moet nie spuit wanneer die vliegtuig duik uitklim of draal nie.

- Gebruik geskikte atomiseringsapparaat wat die vereiste druppelgrootte en bedekking sal produseer, maar die minste verlies van produk verseker. Die spuitstelsel moet 'n druppelspektrum met die kleinste moontlike Relatiewe Span produseer.
- Plaas al die atomiseerders in die binste 60 tot 75 % van die vlerkspan om te verhoed dat druppels binne-in die vlerkpuntvorteks beweeg.
- Die verskil in temperatuur tussen die nat- en droëboltermometer van 'n swaaihigrometer, moet nie 8°C oorskry nie.
- Stop bespuiting indien die windspoed 15 km/uur oorskry.
- Stop bespuiting tydens turbulente, onstabiele en droë toestande gedurende die hitte van die dag.
- Bespuiting onder temperatuur inversie toestande (deur bo of binne die inversie laag te spuit) en/of hoë lugvog toestande (relatiewe humiditeit 80% en meer) mag tot die volgende probleme aanleiding gee:
 - verlaagde effektiwiteit aangesien die druppels as 'n wolk in die lug bly hang en moontlik verdamp (onvoldoende bedekking op teiken).
 - skade aan nie-teiken gewasse of sensitiewe areas as gevolg van wegdrywing van die spuitwolk na nieteiken area.
- Verseker dat die Lugbespuitingsoperateur presies weet watter lande bespuit moet word.
- Dit is noodsaaklik om 'n versekering van die Lugbespuitingsoperateur te verkry dat aan al die bogenoemde vereistes voldoen sal word en dat data van belang in 'n logboek saamgevat is vir toekomstige verwysing.

GEBRUIKSAANWYSINGS**GEBRUIK SLEGS SOOS AANGEDUI**

Verseker dat spuittoerusting skoon en akkuraat gekalibreer is voordat "Sharda Carbosulfan 400 SC" toegedien word. Maak spuittoerusting deeglik skoon na gebruik.

Meng – Meng die benodigde hoeveelheid "Sharda Carbosulfan 400 SC" met 'n gelyke hoeveelheid water; maak die spuitteknik halfvol met water; voeg die spuitmengsel by die water; maak die spuitteknik tot by die gewenste volume met water vol. Die mengsel moet gedurig geror word tydens meng en toediening. Moet nie die spuitmengsel toelaat om vir enige tyd stil te staan nie.

Mielies – Voorkomende Behandeling Tydens Plant

Met die gebruik van trekgergemonteerde spuittoerusting tydens plant, word die "Sharda Carbosulfan 400 SC" spuitmengsel in 'n 5 cm breë strook in die oop plantvoor gespuit na die saad geplaas word maar voordat die plantvoor toegemaak en vasgetrap word. Dit word aanbeveel om die spuitkoppe na agter te rig net voor die drukwiel sodat 'n bietjie grond reeds oor die saad geval het teen die tyd dat die spuitmengsel in die voor ingespuit word.

Gebruik laedrukspuittoerusting.

Die volume spuitmengsel moet 'n minimum van 450 ml per 100 m plantvoor wees.

MIELIES / PLAAG	TOEDIENINGS HOEVEELHEID	OPMERKINGS
Swart mieliekewer (<i>Heteronychus arator</i>)	60 ml per 100 m plantvoor	Dien toe in nie minder as 400 ml water per 100 m nie. Hierdie behandeling sal stronkboorder vir tot 6 weke beheer.
Aalwurms Bladspringer (Streepsiekte vektor) (<i>Cicadulina mbila</i>) Grondkalanders (<i>Protostrophus species</i>) Valsdraadwurms (<i>Tenebrionidae species</i>)	48 ml per 100 m plantvoor	Dien toe in nie minder as 400 ml water per 100 m nie. Hierdie behandeling sal nie swart mieliekewer of stronkboorder beheer nie.

Mielies – Korrektiewe Grondkalanders Behandeling na Gewasopkoms

Dien "Sharda Carbosulfan 400 SC" toe sodra die eerste tekens van grondkalanders skade op saailinge opgemerk word. Spuit 'n 30 cm wye strook oor die mielie rye. Gebruik 2.0ℓ spuitmengsel per 100 m ry om goeie bedekking te verkry.

MIELIES / PLAAG	TOEDIENINGS HOEVEELHEID	OPMERKINGS
Grondkalanders (<i>Protostrophus species</i>)	10 ml per 100 m ry	Dien toe in ten minste 2.0 ℓ water per 100 m rylengte. Grondkalanders sal eers na hulle op behandelde plante gevreet het, gedood word. Dus beperkte plantskade sal voorkom op die jong plante na toediening.

Katoen – Plantluis Beheer

Dien "Sharda Carbosulfan 400 SC" toe as 'n volle blaardekbespuiting met grondspuittoerusting of in 'n minimum van 30ℓ per ha met lugtoediening.

KATOEN / PLAAG	TOEDIENINGS HOEVEELHEID	OPMERKINGS
Katoenplantluis (<i>Aphis gossypii</i>)	Plante tot 60 cm hoog: 600 ml/ha Plante hoër as 60 cm: 900 ml/ha	Begin toedienings sodra plantluis en/of hulle heuningdou opgemerk word.

Wingerd – Myt Beheer

Dien toe in lente wanneer myte beweeg na nuwe plantegroei.

WINGERD / PLAAG	TOEDIENINGS HOEVEELHEID	OPMERKINGS
Knopmyt (<i>Colomerus vitis</i>) Erinoosmyt (<i>Eriophyes vitis</i>)	60 ml per 100 ℓ water	Dien drie bespuitings toe. Dien die eerste bespuiting toe sodra die lote 5 tot 10 cm lank is. Herhaal die bespuitings met 14 dae tussenposes.