

CopperKill SC

Act No. 36 of 1947 / Wet Nr. 36 van 1947
SA Reg. No. L10999

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

GROUP

M01

FUNGICIDE

PRODUCT INFO:

A suspension concentrate, contact fungicide and bactericide for the control of diseases in crops as indicated.

PRODUK INFO:

'n Suspensie konsentraat kontak swamdoder en bakteriesied vir die beheer van siektes in gewasse soos aangedui.

HAZARD STATEMENTS:

Harmful if swallowed.
Harmful if inhaled.
Causes serious eye damage.
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.



DANGER

Active Ingredients / Aktiewe Bestanddele

Copper Hydroxide
(Metallic copper equivalent)

538 g/l
350 g/l

Koperhidroksied
(Metaal koper ekwivalent)

Net (l) SEE CONTAINER

Registration Holder / Registrasiehouer



Product approved for use in organic farming according to Reg. (EU) 2018/848; JAS: Not. 1605, Table 2 by Ceres GmbH. Restriction: Maximum of 28 kg/ha of copper over a time period of 7 years authorised.



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Batch No.
Date of Manufacture

SEE
CONTAINER

Lot Nr.
Datum van Vervaardiging

Human Poison Helpline +27-86 155 5777 • Griffon Poison Information Centre +27-82 446 8946

Group III

UN No. / VN Nr. 3082

CH004

CopperKill SC

Act No. 36 of 1947
SA Reg. No. L10999

A suspension concentrate, contact fungicide and bactericide for the control of diseases in crops as indicated.

ACTIVE INGREDIENTS:

COPPER HYDROXIDE 538 g/ℓ
(METALLIC COPPER EQUIVALENT) 350 g/ℓ

REGISTERED BY:

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WARNINGS

Harmful if swallowed
Harmful if inhaled
Causes serious eye damage
Very toxic to aquatic life with long lasting effects

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

- ▶ Apples 14 days
- ▶ Avocados 14 days
- ▶ Citrus 14 days
- ▶ Coffee 14 days
- ▶ Grapes (Table) 4 – 6 weeks
- ▶ Grapes (Wine) 21 days
- ▶ Mangoes 14 days
- ▶ Peaches, Nectarines, Plums 14 days
- ▶ Potatoes 14 days

Compliance with these withholding periods and application methods 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 waiting periods. Although **CopperKill 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. **CopperKill SC** must be tested on new cultivars prior to usage over big areas.

RE-ENTRY INTERVAL: Do not enter treated area until spray deposit has 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 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

If medical advice is needed, have product container or label at hand.
Avoid breathing fumes/mist/spray.
Wash hands, face and exposed skin thoroughly after handling. Do not touch eyes.
Do not eat, drink or smoke when using this product.
Avoid release to the environment.
Wear protective gloves, protective clothing, eye and face protection.
IF SWALLOWED: Rinse mouth and get medical help.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help.
IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical help.
Take off contaminated clothing and wash it before reuse.
Collect spillage.
Store locked up.
Dispose of contents and container in accordance with national regulations.

TRIPLE RINSE THE EMPTY CONTAINER AS FOLLOWS: Containers must be completely emptied before being disposed of. Invert the empty container over the spray or mixing tank and drain for at least 30 seconds until the flow has slowed down to a drip. Thereafter rinse the empty container three times in succession with one quarter of the container volume fresh water and decant the rinsate into the spray or mixing 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:

Copper (II) hydroxide (Cas no: 20427-59-2) Acute Oral Toxicity Category 4, H302; Acute Inhalation Toxicity Category 2, H330; Eye Damage Category 1, H318; Aquatic Acute Category 1, H400; Aquatic Chronic Category 1, H410 (53.8 % w/v).

FIRST AID TREATMENT

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

- 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.
 - DO NOT perform mouth-to-mouth resuscitation if victim ingested or inhaled the substance; wash face and mouth before giving artificial respiration. Use a pocket mask equipped with a one-way valve or other proper respiratory medical device.
 - Administer oxygen if victim's breathing is difficult or irregular. Get medical help if you feel unwell.
- SKIN:**
- Remove and isolate contaminated clothing, shoes, and leather goods and take a shower.
 - Rinse affected areas cautiously 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 eyes IMMEDIATELY with clean running water for at least 15 minutes, while holding eyelids apart. Remove contact lenses after 5 minutes if present and easy to do. Continue rinsing while holding eyelids apart.
 - Do not rub eye/s. Seek immediate medical help if irritation continues.
- INGESTION:**
- If swallowed, rinse mouth thoroughly with water. DO NOT induce vomiting, unless instructed to do so by poison control centre or doctor.
 - If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomits, keep on giving fluids.
 - Never give anything by mouth to an unconscious person.
- 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:**
- **INHALATION:** Chronic inhalation exposure may cause a metallic taste in the mouth, irritation of the upper respiratory tract such a nasal mucosa that may progress to perforation of the nasal septum. Chronic cough may also occur.
 - **SKIN:** Causes mild skin irritation. Not significantly absorbed through the intact skin. Readily absorbed through damaged or burned skin. Excessive exposure, especially if prolonged, may produce skin irritation.
 - **EYES:** Causes irritation, redness, and pain.
 - **INGESTION:** Slightly toxic by oral exposure. If ingested in large quantities, the material may produce toxicity. Repeated ingestion of copper salts may result in anemia, liver and kidney damage.

RESISTANCE WARNING

For resistance management: **CopperKill SC** is a group code (M01) fungicide. Any fungal population may contain individuals naturally resistant to **CopperKill SC** and other group code (M01) fungicides. The resistant individuals can eventually dominate the fungal population if these fungicides are used repeatedly. These resistant fungi may not be controlled by **CopperKill SC** or any other group code (M01) fungicides.

To prevent or delay fungicide resistance:

- avoid exclusive repeated use of fungicides from the same fungicide group code. Alternate or tank mix with registered products from different fungicide group codes,
- for tank mixing or alternation with products in other fungicide group codes, refer to individual product labels,
- integrate other forms of control methods (chemical, cultural, biological) into disease control programmes.

For specific information on resistance management contact the registration holder of this product or contact your local supplier.

MODE OF ACTION

Copper hydroxide is classified as a multisite fungicide. It acts by disrupting cellular proteins and enzyme systems of pathogens.

USE RESTRICTIONS

- Do not apply **CopperKill SC** in combination with any acidifying products such as zinc nitrate, ammonium sulphate, amino-acid chelated foliar fertilizers or any other acidifying products.
- Do not apply citric acid containing products such as potassium citrate or calcium citrate in combination with or within 30 days after a **CopperKill SC** application in open orchards.
- Do not apply **CopperKill SC** under adverse weather conditions causing stress to the crop, such as high or low temperatures, high or low humidity, rain, or frost. Do not apply when the fruit is still wet as a result of rain or dew. Do not apply **CopperKill SC** during the night.
- Avoid copper accumulation in the soil.
- Refer to **DIRECTIONS FOR USE** and **APPLICATION TABLE** for more information.

DIRECTIONS FOR USE – use only as indicated

COMPATIBILITY:

The compatibility of **CopperKill 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 **CopperKill SC** in combination with any acidifying products such as zinc nitrate, ammonium sulphate, amino-acid chelated foliar fertilizers or any other acidifying products. Do not apply citric acid containing products such as potassium citrate or calcium citrate in combination with or within 30 days after a **CopperKill SC** application in open orchards. In orchards under netting, extra caution should be taken, and the interval increased. It is possible that formulations may change from time to time and is therefore recommended that a small-scale physical compatibility test be done prior to the tank mixture being made. Consult a qualified agronomist before adding any buffers, acidifiers, or any other adjuvants to the tank mixture.

MIXING INSTRUCTIONS:

Half-fill the spray tank with clean water, suitable for irrigation. The efficacy of **CopperKill SC** may be influenced by the quality of the spray water.

Pre-mix **CopperKill SC** as follows:

- Handle with care and wear gloves while preparing the pre-mix.
- Shake the **CopperKill SC** container thoroughly before mixing.
- Add the required quantity of **CopperKill SC** to 5 – 10 ℓ clean water to make a pre-mix suspension.
- Add this suspension to the spray tank and fill to the final required volume with water.

- Agitate spray mixture constantly before and during application.
- **TANK MIXTURES MUST BE SPRAYED OUT IMMEDIATELY AND NOT ALLOWED TO STAND IN THE SPRAY TANK OVERNIGHT.**
- Clean applicator thoroughly after use and dispose of wash water where it will not contaminate crops, grazing, food, rivers or dams.

ENVIRONMENTAL CONDITIONS:

Do not apply **CopperKill SC** under adverse weather conditions causing stress to the crop, such as high or low temperatures, high or low humidity, rain, or frost. Do not apply when the fruit is still wet as a result of rain or dew. Do not apply **CopperKill SC** during the night.

IMPORTANT:

It is essential that **CopperKill SC** be kept agitated throughout the entire mixing and spraying operation. **CopperKill SC** is a preventive fungicide and applications must be carried out before or just as the first signs of the disease are noticed.

APPLICATION TABLE		
CROP / DISEASE	DOSAGE RATE mℓ/100ℓ	REMARKS
APPLES Scab (<i>Venturia inaequalis</i>)	180 mℓ	Apply only at green tip stage of apples.
AVOCADOS Fruit spot (<i>Pseudocercospora purpurea</i>)	180 mℓ to a maximum of 12 ℓ per hectare (ha)	Apply 3 full cover applications. Start applications early in November and repeat every 4 weeks.
CITRUS Black spot (<i>Phyllosticta citricarpa</i> / <i>Guignardia citricarpa</i>)	Successive CopperKill SC applications, adverse environmental conditions, late applications (March – April) or acidifying products can cause stippling of fruit. To avoid stipple formation, replace every second application with mancozeb. Do not apply CopperKill SC with any buffers or acidifiers, or any other adjuvants before consulting a qualified agronomist.	
	120 mℓ to a maximum of 15 ℓ per hectare (ha)	Start applications before mid-October. Apply 3 high volume sprays at 30-day intervals during the susceptible period from October to end December. During a high rainfall season, a 4 th application may be necessary.
Alternaria spot (<i>Alternaria alternata</i> pv. <i>citri</i>)	150 mℓ to a maximum of 15 ℓ per hectare (ha) OR 75 mℓ + 100 g mancozeb to a maximum of 8 ℓ per hectare (ha)	Apply as a high-volume cover spray. Begin applications at first flush and repeat every 28 days until harvest.
COFFEE Rust (<i>Hemileia vastatrix</i>)	250 mℓ to a maximum of 3.5 ℓ per hectare (ha)	Apply as a full cover application. Begin application in October/November and repeat 4 – 5 times with 4-week intervals. Apply at least 1000 ℓ spray mixture per hectare.
DECIDUOUS FRUIT (PLUMS) Bacterial spot (<i>Xanthomonas campestris</i> pv. <i>pruni</i>)	150 mℓ to a maximum of 5 ℓ per hectare (ha)	NOTE: • DO NOT apply to the cultivar Ruby Nel. • Do not apply in combination with stickers and spreaders. 1. At Bud Swell Stage: Apply as a high-volume spray using 1200 – 2000 ℓ spray mixture per hectare.
	75 mℓ + 200 g spray lime to a maximum of 10 ℓ per hectare (ha)	2. Period 90 % petal drop to 14 – 21 days before harvesting: MODERATELY INFECTED ORCHARDS: Apply as a high-volume spray using 1200 – 2500 ℓ spray mixture per hectare.
	150 mℓ + 200 g spray lime to a maximum of 5 ℓ per hectare (ha)	3. Severely infected orchards: Apply as mentioned above.
	150 mℓ + 200 g spray lime to a maximum of 5 ℓ per hectare (ha)	4. 75 % Leaf drop: Apply as a single application using 1 500 – 2500 ℓ spray mixture per hectare.
GRAPES Downy mildew (<i>Plasmopara viticola</i>)	150 mℓ to a maximum of 2 ℓ per hectare (ha)	Start applications when shoots are approximately 10 cm long and repeat every 10 – 14 days depending on weather conditions. Ensure good coverage of the vines. Increase the spray volume progressively from 500 ℓ – 1500 ℓ/ha, depending on the vine growth. Do not apply after pea berry stage.
MANGOES Bacterial spot	225 mℓ to a maximum of 13.5 ℓ per hectare (ha)	Apply at 2 – 4 week intervals from just after fruit set. Apply as a high-volume cover spray.

(<i>Xanthomonas mangiferae-indicae</i>)		
ORNAMENTALS Black spot - Roses (<i>Actinonema rosae</i>)	225 mℓ	Apply at first signs of disease symptoms and repeat as necessary with 7 – 10 day intervals.
Rust - Gladiolus and Carnations (<i>Uromyces</i> spp.)	375 mℓ	Apply as a full cover spray. Apply every 7 – 14 days, depending on weather conditions, favorable for disease development.
Downy mildew (<i>Peronospora</i> spp.)	375 mℓ	Apply as a full cover spray. Apply every 7 – 14 days, depending on weather conditions, favorable for disease development.
Leaf spot (<i>Alternaria</i> spp.)	375 mℓ	Apply as a full cover spray. Apply every 7 – 14 days, depending on weather conditions, favorable for disease development.
PEACHES, NECTARINES, PLUMS Leaf curl (<i>Taphrina deformans</i>)	200 mℓ	Apply as a full cover spray at 60 % leaf drop and at bud swell . Use 1200 – 2000 ℓ spray mixture per hectare.
POTATOES Early blight (<i>Alternaria solani</i>)	150 mℓ	Start application before or just when symptoms are noticed. Apply every 7 – 10 days, depending on weather conditions. Apply in 500 – 1500 ℓ water/ha, depending on plant size.
Late blight (<i>Phytophthora infestans</i>)	150 mℓ	Start preventative applications before signs of the disease. Apply at 7 – 10 day intervals.
SEEDLINGS Damping off and other soil fungi	200 mℓ	Apply at the rate of 15 ℓ mixture/10 m ² on seedbeds.

CH002

CopperKill SC

Wet Nr. 36 van 1947
SA Reg. Nr. L10999

'n Suspensie konsentraat kontak swamdoder en bakteriesied vir die beheer van siektes in gewasse soos aangedui.

AKTIEWE BESTANDELE:

KOPERHIDROKSIED 538 g/ℓ
(METAAL KOPER EKWIVALENT) 350 g/ℓ

GEREGISTREER DEUR:

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WAARSKUWINGS

Skadelik indien ingesluk
Skadelik indien ingeasem
Veroorsaak ernstige oogskade
Baie giftig vir waterlewendes organismes met langdurige gevolge

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

- ▶ Aartappels 14 dae
- ▶ Appels 14 dae
- ▶ Avokado's 14 dae
- ▶ Druive (Tafel) 4 – 6 weke
- ▶ Druive (Wyn) 21 dae
- ▶ Koffie 14 dae
- ▶ Mangoes 14 dae
- ▶ Perskes, Nektariens, Pruime 14 dae
- ▶ Sitrus 14 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 invoervereistes van ander lande nie. Indien die gewas wat behandel word bestem is vir uitvoer, raadpleeg die betrokke in- of uitvoerder rakende die gebruik van hierdie produk, die MRL en aanbevole onthoudingsperiodes. Alhoewel **CopperKill 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. **CopperKill SC** moet eers op nuwe kultivars getoets word voordat dit oor groot areas aangewend word.

HERBETREDINGSINTERVAL: Moenie 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 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 inaseming van stuifsel/dampe/spuitstof.
Was hande, gesig en blootgestelde vel deeglik na hantering. Moet nie aan oë raak nie.
Moet nie eet, drink of rook wanneer hierdie produk gebruik word nie.
Vermy vrystelling in die omgewing.
Dra beskermende handskoene, beskermende klere, oog- en gesigbeskerming.
INDIEN INGESLUK: Spoel mond uit en kry mediese hulp.
INDIEN INGEASEM: Neem slagoffer na vars lug en hou gemaklik vir asemhaling. Kry mediese hulp.
INDIEN IN OË: Spoel onmiddellik met water vir etlike minute. Verwyder kontaklenze, indien aanwesig en maklik om te verwyder. Hou aan met spoel. Kry mediese hulp.
Trek alle besoedelde klere uit en was dit voor hergebruik.
Maak stortsel bymekaar.
Berg agter slot en grendel.
Raak ontslae van inhoud en houer volgens nasionale regulasies.

SPOEL DIE LEË HOUER DRIE MAAL SOOS VOLG: Die houers moet heeltemal leeg wees voordat dit aan 'n versamelaar of verwerker oorhandig word. 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 vars water, teen 'n kwart 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). Moenie die houer begrawe, verbrand of aan enige ander partye skenk wat dit as houer vir voedsel of drinkgoed mag gebruik nie.

RELEVANTE STOWWE:

Koper (II) hidrosied (Cas no: 20427-59-2) Akute Giftigheid Mondelings Kategorie 4, H302; Akute Giftigheid Inaseming Kategorie 2, H330; Oogskade Kategorie 1, H318; Waterlewend Akut Kategorie 1, H400; Waterlewend Kronies Kategorie 1, H410 (53.8 % m/v).

NOODHULPBEHANDELING

Ingeval van 'n ongeluk of as u onwel voel, verkry mediese hulp dadelik en wys ETIKET indien moontlik.

- INGEASEM:**
- 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.
 - MOENIE mond-tot-mond-asemhaling toepas indien die slagoffer die stof opgeneem of ingeasem het nie; was gesig en mond voordat kunsmatige asemhaling toegepas word. Gebruik 'n sakmasker toegerus met 'n eenrigtingklep of ander geskikte mediese asemhalingtoestel.
 - Dien suurstof toe as die slagoffer se asemhaling moeilik of onreëlmatig is. Kry mediese hulp indien u ongesteld voel.
- VEL:**
- Verwyder en isoleer besmette klere, skoene en leergoedere dadelik en gaan stort.
 - Spoel aangetaste areas 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 ONMIDDELIK met skoon lopende water vir ten minste 15 minute terwyl die ooglede vanmekaar gehou word. Verwyder kontaklense na 5 minute indien aanwesig en maklik om te doen. Hou aan met spoel terwyl ooglede vanmekaar gehou word.
 - Moenie oë vryf nie. Kry mediese hulp indien irritasie voortduur.
- OPNEMING:**
- Indien ingesluk, spoel mond deeglik uit met water. MOENIE vomering aanmoedig nie, tensy deur 'n gifbeheersentrum of dokter aangesê word om dit te doen.
 - Indien spontane vomering voorkom, moet die persoon vooroor leun om te voorkom dat vomering ingeasem word. Laat persoon slukkies van 'n glas water neem indien in staat om te sluk.
 - Moet nooit iets per mond aan 'n bewustelose persoon toedien nie.
- 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, AKUUT EN VERTRAAGD:**
- **INASEMING:** Veroorsaak irritasie van slymvliese in die asemhalingskanaal. Die produk is effens toksies indien ingeasem. Langdurige inaseming kan 'n metaalsmaak in die mond en irritasie van die boonste lugweë, bv. neusslymvlies veroorsaak. Perforasie van die neusseptum kan ook mettertyd ontwikkel. Langdurige hoës kan ook voorkom.
 - **VEL:** Veroorsaak ligte velirritasie. Nie gewoonlik deur ongeskonde vel geabsorbeer nie, maar word maklik deur beskadigde of gebrande vel geabsorbeer. Oormatige/langdurige blootstelling kan velirritasie veroorsaak.
 - **OË:** Veroorsaak oogirritasie, rooiheid en pyn.
 - **OPNEMING:** Effens giftig deur mondlike blootstelling. Indien dit in groot hoeveelhede ingeneem word kan dit toksisiteit veroorsaak. Herhaaldelike inname van koper kan tot bloedarmoede, lewer- en nierskade lei.

WEERSTANDSWAARSKUWING

Vir weerstandsbestuur: **CopperKill SC** is 'n groeppode (M01) swamdoder. Enige populasie van 'n spesifieke swam mag individue insluit wat 'n natuurlike weerstand teen **CopperKill SC**, of enige ander groeppode (M01) swamdoder het. Indien hierdie swamdoders herhaaldelik aangewend word, kan die weerstandbiedende individue uiteindelik die swampopulasie oorheers. Hierdie weerstandbiedende swamme sal waarskynlik nie deur **CopperKill SC** of enige ander groeppode (M01) swamdoders beheer word nie.

Om weerstand teen swamdoder te vertraag:

- vermy die herhaaldelike gebruik van swamdoders met dieselfde groeppode. Wissel af met, of gebruik tenkingsels van produkte in verskillende swamdoder groeppodes,
- raadpleeg toepaslike individuele produketikette wanneer daar afgewissel word, of tenkingsels gemaak word, met produkte in ander swamdoder groeppodes,
- integreer ander beheermaatreëls (chemies, verbouing, biologies) in siektebeheerprogramme.

Vir spesifieke inligting oor weerstandsbestuur kontak die registrasiehouer van hierdie produk of jou plaaslike verskaffer.

WERKINGSWYSE

Koperhidroksied word as 'n veelvuldige teiken swamdoder geklassifiseer. Dit ontwig die sellulêre proteïene en ensiemstelsels van patogene.

GEBRUIKSBEPERKINGS

- Moenie **CopperKill SC** in kombinasie met enige versurende produkte soos sinknitraat, ammonium sulfaat, aminosuur gecheleerde blaarvoedingstowwe of enige ander versurende produkte toedien nie.
- Moenie sitroensuurbevattende produkte soos kaliumsitraat of kalsiumsitraat in kombinasie met of binne 30 dae na 'n **CopperKill SC** toediening in oop boorde toedien nie.
- Moenie **CopperKill SC** onder ongunstige weerstoestande wat stres op die gewas veroorsaak, soos hoë of lae temperatuur, hoë of lae humiditeit, reën of ryp toedien nie. Moet nie toedien as die vrugte nog nat is as gevolg van reën of dou nie. Moenie **CopperKill SC** gedurende die nag toedien nie.
- Vermy koper akkumulering in die grond.
- Verwys na **GEBRUIKSAANWYSINGS** en **TOEPASSINGSTABEL** vir meer inligting.

GEBRUIKSAANWYSINGS – gebruik slegs soos aangedui

VERENIGBAARHEID:

Die verenigbaarheid van **CopperKill SC** met ander produkte hang af van die formulering van die betrokke produkte asook die kwaliteit van die water wat gebruik gaan word. Moenie **CopperKill SC** saam met versurende produkte soos sink nitraat, ammonium sulfaat, aminosuur gecheleerde blaarvoedingstowwe of enige ander versuringsprodukte toedien nie. Moenie sitroensuur bevattende produkte soos kaliumsitraat en kalsiumsitraat in kombinasie met of binne 30 dae na **CopperKill SC** in oop boorde toedien nie. Wees versigtig tydens die toediening in boorde onder skadunet, en neem kennis dat die toedienings interval verleng kan word. Dit is moontlik dat formulering van tyd tot tyd kan verander, en dus word daar aanbeveel dat 'n fisiese verenigbaarheidstoets uitgevoer word voordat 'n tenkingsel gemaak word. Raadpleeg 'n gekwalifiseerde landboukundige voordat enige buffers, versuurders, of enige ander bymiddels by die tenkingsel gevoeg word.

MENGINSTRUKSIES:

Vul die spuittenk halfvol met skoon water, geskik vir besproeiing. Die effektiwiteit van **CopperKill SC** kan deur die kwaliteit van besproeiingswater beïnvloed word.

Meng CopperKill SC vooraf as volg:

- Hanteer versigtig en dra handskoene tydens die voorbereiding van die voor-af mengsel.
- Skud die **CopperKill SC** houër deeglik voordat die mengsel opgemaak word.
- Voeg die korrekte hoeveelheid **CopperKill SC** by 5 – 10 ℓ skoon water om 'n **CopperKill SC** voor-af mengsel op te maak.
- Voeg die suspensie in die halfvol spuittenk en vul met water tot by finale volume.
- Maak seker die spuitmengsel word voortdurend gemeng, voor en tydens toediening.
- **DIE TENKMENGSEL MOET ONMIDDELIK UITGESPUIT WORD EN NIE TOEGELAAT WORD OM OORNAG IN DIE SPUITTENK TE STAAN NIE.**
- **Toerusting moet deeglik na gebruik skoongemaak word en afvalwater moet op 'n wyse weggedoen word wat nie tot besoedeling van gewasse, weiding, voedsel, riviere en damme lei nie.**

OMGEWINGSTOESTANDE:

Moenie **CopperKill SC** tydens ongunstige weerstoestande soos hoë of lae temperatuur, hoë of lae humiditeit, reën of ryp toedien nie. Moenie **CopperKill SC** toedien wanneer die vrugte nog nat is as gevolg van reën of dou nie. MOENIE **CopperKill SC** in die aand toedien nie.

BELANGRIK:

Dit is belangrik dat **CopperKill SC** tydens aanmaak en toediening deurgaans gemeng word. **CopperKill SC** is 'n voorkomende swamdoder en moet toegedien word voordat of sodra die eerste tekens van siekte opgemerk word.

TOEDIENINGSTABEL		
GEWAS / SIEKTE	DOSIS mℓ/100ℓ	AANBEVELINGS
AARTAPPELS Vroeëroes <i>(Alternaria solani)</i> Laatroes <i>(Phytophthora infestans)</i>	150 mℓ	Dien toe net voor of sodra eerste siektesimptome sigbaar is. Spuit elke 7 – 10 dae, afhangende van die weerstoestande. Dien toe in 500 – 1500 ℓ water/ha, afhangende van plantgrootte.
	150 mℓ	Dien voorkomend toe, voordat tekens van siekte sigbaar is. Dien toe teen 7 – 10 dae intervalle.
APPELS Skurf <i>(Venturia inaequalis)</i>	180 mℓ	Dien slegs toe tydens groenpunt stadium van appels.
AVOKADO'S Vrugvlek <i>(Pseudocercospora purpurea)</i>	180 mℓ tot 'n maksimum van 12 ℓ per hektaar (ha)	Dien 3 voldekbespuitings toe. Begin toediening vroeg November en herhaal elke 4 weke.
DRUIWE Donsige skimmel <i>(Plasmopara viticola)</i>	150 mℓ tot 'n maksimum van 2 ℓ per hektaar (ha)	Begin toedienings wanneer lote ongeveer 10 cm lank is en herhaal elke 10 – 14 dae afhangende van die weerstoestande. Maak seker dat die wingerd goed bedek word. Verhoog die spuitvolume stelselmatig van 500 ℓ – 1500 ℓ/ha, afhangende van die groei van die wingerd. MOENIE na die ertjekorrel stadium toedien nie.
KOFFIE Roes <i>(Hemileia vastatrix)</i>	250 mℓ tot 'n maksimum van 3.5 ℓ per hektaar (ha)	Dien as voldekbespuiting toe. Begin toediening in Oktober/November en herhaal 4 – 5 keer met 4-week intervalle. Dien ten minste 1000 ℓ spuitmengsel per hektaar toe.
MANGOES Bakteriese vlek <i>(Xanthomonas mangiferae-indicae)</i>	225 mℓ tot 'n maksimum van 13.5 ℓ per hektaar (ha)	Dien toe net na vrugset met 2 – 4 week intervalle. Dien toe as 'n hoë-volume dekbespuiting.
PERSKES, NEKTARIENS, PRUIME Krulblaar <i>(Taphrina deformans)</i>	200 mℓ	Dien toe as 'n voldekbespuiting tydens 60 % blaarval en knopswelstadium . Gebruik 1200 – 2000 ℓ per hektaar.
SAGTEVRUGTE (PRUIME) Bakteriese vlek <i>(Xanthomonas campestris pv. pruni)</i>	150 mℓ tot 'n maksimum van 5 ℓ per hektaar (ha)	NOTA <ul style="list-style-type: none"> • MOENIE op Ruby Nel kultivar toedien nie. • MOENIE in kombinasie met benatters en verspreiders toedien nie.
	75 mℓ + 200 g spuitkalk tot 'n maksimum van 10 ℓ per hektaar (ha)	1. Knopswelstadium: Dien toe as hoë-volume spuit teen 1200 – 2000 ℓ per hektaar.
	150 mℓ + 200 g spuitkalk tot 'n maksimum van 5 ℓ per hektaar (ha)	2. Periode van 90 % blomblaarval tot 14 – 21 dae voor oes: MATIG GEÏNFEKTEERDE BOORDE: Dien toe as 'n hoë-volume bespuiting teen 1200 – 2500 ℓ per hektaar.
		3. SWAAR GEÏNFEKTEERDE BOORDE: Dien toe soos bogenoemde aanwysing.

	150 mℓ + 200 g spuitkalk tot 'n maksimum van 5 ℓ per hektaar (ha)	4. 75% Blaarval: Dien toe as 'n enkele toediening teen 1 500 – 2500 ℓ spuitmengsel per hektaar.
SAAILINGE Omvalsiekte en ander grondgedraagde swamsiektes	200 mℓ	Dien toe teen 'n tempo van 15 ℓ mengsel/10 m ² op saadbeddings.
SIERPLANTE (ORNAMENTALS) Swartvlek – Rose (<i>Actinonema rosae</i>)	225 mℓ	Dien toe sodra eerste siektesimptome sigbaar is herhaal soos nodig teen 7 – 10 dae intervalle.
Bruinroes – Gladiolus en Angeliere (<i>Uromyces</i> spp.)	375 mℓ	Dien toe as 'n voldekbepuiting. Herhaal elke 7 – 14 dae, afhangeende of die weerstoestand gunstig is vir siekte ontwikkeling.
Donsige meeldou (<i>Peronospora</i> spp.)	375 mℓ	Dien toe as 'n voldekbepuiting. Herhaal elke 7 – 14 dae, afhangeende of die weerstoestand gunstig is vir siekte ontwikkeling.
Blaarvlek (<i>Alternaria</i> spp.)	375 mℓ	Dien toe as 'n voldekbepuiting. Herhaal elke 7 – 14 dae, afhangeende of die weerstoestand gunstig is vir siekte ontwikkeling.
SITRUS Swartvlek (<i>Phyllosticta citricarpa</i> / <i>Guignardia citricarpa</i>)	Opeenvolgende CopperKill SC toedienings, ongunstige omgewingstoestand, laat toediening (Maart – April) of versurende produkte kan stippels op vrugte veroorsaak. Om stippelvorming op vrugte te vermy, kan elke tweede toediening met mankoseb vervang word. Moenie CopperKill SC aanwend saam met enige buffers, versuurders, of ander bymiddels sonder om 'n gekwalifiseerde landboukundige te raadpleeg nie.	
	120 mℓ tot 'n maksimum van 15 ℓ per hektaar (ha)	Begin toediening voor middel-Oktober. Dien 3 hoë-volume bespuitings toe teen 30 dae intervalle gedurende vatbare periodes vanaf Oktober tot einde Desember. Gedurende 'n hoë reënvalseisoen, mag 'n 4 ^{de} toediening nodig wees.
Alternaria vlek (<i>Alternaria alternata</i> pv. <i>citri</i>)	150 mℓ tot 'n maksimum van 15 ℓ per hektaar (ha) OF 75 mℓ + 100 g mankoseb tot 'n maksimum van 8 ℓ per hektaar (ha)	Dien toe as 'n hoë-volume dekbespuiting. Begin toediening sodra eerste blaarstuwing waargeneem word en dien elke 28 dae toe tot en met oes.

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