

Vir volledige inligting sien ingeslote voubiljet / For full particulars see enclosed leaflet.

QA-KILL

A CONTACT LIQUID AGRICULTURAL DISINFECTANT / PLANT SANITISER
'N KONTAK DODENDE VLOEIBARE LANDBOUKUNDIGE ONTSMETTINGSMIDDEL / PLANT SANITEERDER.

REG. NO: ACT29GNR 529/243642/040/344

AKTIEWE BESTANDEEL:

Generiese Didesiel Dimetiel
Ammonium Chloried

150g/L

ACTIVE INGREDIENT:

Generic Didecyl Dimethyl
Ammonium Chloride

Vervaardig deur / Manufactured by
ICA International Chemicals (Pty) Ltd
28 Planken Street
Plankenburg Industrial • Stellenbosch 7601

Versprei deur / Distributed by

Batch No:

Date of
Manufacture:

HYGROTECH

Netto/Net
Volume

HYGROTECH PROPERTIES (EDMS) BPK/SEED (PTY)LTD
Reg. No. 84/00638/07

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**CAUTION
VERSIGTIG**



QA-Kill

Reg. No.: ACT29GNR529/243642/040/344

AGRICULTURAL DISINFECTANT / PLANT SANITISER

A contact active liquid agricultural disinfectant / plant sanitiser, active against pathogenic micro-organisms / bacteria.

ACTIVE INGREDIENT:

Didecyldimethylammonium Chloride 150g/L
(Quaternary ammonium compound)

DISTRIBUTED BY:

Hygrotech South Africa (Pty) Ltd

Reg. No. 1973/013885/07

1 Gerhard Braak Str, Pyramid

PO Box 17220 • Pretoria North • 0116

Tel.: (012) 545 8000 • Fax.: (012) 545 8088

REGISTERED BY:

ICA International Chemicals (Pty) Ltd.

Reg. No.: 2001/013319/07

PO Box 2312 ♦ STELLENBOSCH ♦ 7601 ♦ South Africa

CAUTION

GENERAL INFORMATION

- ▶ **QA-Kill** is stable, effective, not pH dependable and can therefore be used in fertigated irrigation water.
- ▶ **QA-Kill** stays active as long as it is in solution.
- ▶ **QA-Kill** has wetting characteristics.

GENERAL INSTRUCTIONS

- ▶ **QA-Kill** is not compatible with concentrated anionic compounds.
- ▶ The disinfectant **QA-Kill** can be applied as a plant sanitiser to reduce the overall pathogenic load on the foliage without leaving any residual activity. When **QA-Kill** is used as a foliage spray to sanitise plant surfaces, apply at a rate of 500 – 1500L spray mixture per hectare, depending on plant size. (Higher volumes per hectare are necessary for tree crops.) Ensure that both upper and lower leaf surfaces are treated. IMPORTANT: **QA-Kill** should be incorporated into a normal fungicidal programme for adequate disease control.
- ▶ IMPORTANT: Although numerous phytotoxicity trials were done it is impossible to verify the sensitivity of all the different crop varieties to **QA-Kill**. It is therefore recommended to first test known agrochemical sensitive varieties before use on big scale.
- ▶ **QA-Kill** can be used in post-harvest dump tanks to assist in post-harvest decay management by killing pathogens in drenches and dump tanks as well as on fruit surfaces. IMPORTANT: **QA-Kill** leaves no residual activity. For effective disease control registered fungicides must still be used. **Fruit and vegetables must not be left in dump tank during any disruption of production. This could result in serious burning of sensitive fruit.**
- ▶ **Do not use QA-Kill in hot water** fungicide dipping tanks. This may result in serious burning of sensitive fruit.
- ▶ Shake before use.

WARNINGS

- ▶ Harmful by inhalation, DO NOT inhale spray.
- ▶ Harmful if swallowed, DO NOT drink the product.
- ▶ The undiluted product may cause serious skin irritation, prevent contact with skin.
- ▶ Risk of serious damage to eyes (corrosive to the eye), prevent contact with eyes.
- ▶ Toxic to fish and other aquatic organisms.
- ▶ Keep out of reach of children, uninformed persons and animals.
- ▶ Store in a cool, dry place away from food, feed and drinking water.

Re-entry interval: Do not enter treated area/field until spray deposit has settled down/dried unless wearing protective clothing and self-contained breathing apparatus.

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, the environment or harm to man or animal 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

- ▶ Prevent inhalation where spray or mist is generated. In case of insufficient ventilation, wear suitable respiratory equipment. **IF INHALED:** If breathing is difficult, remove person to fresh air and keep at rest in a comfortable position. Persons with respiratory conditions must avoid areas while spraying is administered.
- ▶ Prevent skin contact when handling the **undiluted product**, wear rubber gloves. **IF ON SKIN:** Gently wash skin with plenty of water and soap.
- ▶ Prevent contact with eyes; wear chemical splash goggles or safety glasses. **IF IN** contact with eyes, rinse immediately with plenty of water for 15 minutes and seek medical advice.
- ▶ If swallowed, do not induce vomiting: Seek medical advice immediately and show the label or MSDS.
- ▶ Avoid spray drift onto rivers, dams or areas not under treatment.
- ▶ Clean applicator thoroughly after use and dispose of wash water where it will not contaminate crops, grazing, rivers or dams.
- ▶ Triple rinse empty container with clean water equal to 10% of the volume of the container and add rinsing to the spray tank. Puncture the container so that it cannot be re-used. Recycle (do not burn). DO NOT USE container for any other purposes.

DIRECTIONS FOR USE

USE ONLY AS DIRECTED

DISINFECTING or SANITISING OF:	DOSAGE PER 100L WATER	REMARKS
DIPPING TANKS (cold water): Treat the water during post-harvest dipping as well as fruit and vegetable surfaces: Apple, Asparagus, Avocado, Broccoli, Brussels, Butternut, Cauliflower, Citrus, Guava, Leeks, Mango, Melon, Papaya, Pear, Pepper, Persimmon, Potato, Pumpkin, Sweet corn, Sweet potato, Tomato.	100 – 150mL	Dip for 5 minutes. When foaming under heavy agitation (e.g. hydro coolers) occur, use a defoaming product e.g., Foam Fighter. Replace the QA-Kill solution as soon as it gets too dirty. Also refer to "General Instructions".
Post harvest dipping of Flower Bulbs for storage.	100 – 150mL	Use as an initial knock-out action together with a fungicide for prolonged action.
Water in Greenhouse wet-walls	10mL (continuous dosing)	<u>First time application</u> to disinfect wet-walls, give a shock treatment of 100 – 200mL per 100L water. Thereafter continue with dosage as recommended.
Growing medium (inert- or non-organic), equipment such as pruning shears, ploughs, hands, footbaths, etc	1000mL	Make sure that all surfaces are exposed to the QA-Kill solution.
Cold rooms and packing sheds. Greenhouses, seedtrays, other hard surfaces like picking bins, etc.	150 – 200mL	First remove all organic matter from surfaces. Keep wet with QA-Kill solution for at least 10 minutes for best results.
Water for post-harvest treatment of cut flowers in containers.	150mL	The solution can be used 7 – 10 days if kept clean. Do not keep cut flowers in solution for longer than 72 hours.
Applied as an overhead foliar spray on the following crops:		Also refer to "General Instructions"
Asparagus, Beans (dry & green), Brassicas, Carrots, Celery, Cucurbits, Leeks, Lettuce, Onion, Paprika, Peas, Peppers, Potatoes, Spinach, Strawberries, Tomatoes.	100mL	First application after transplant of seedlings or 6 weeks after seeding. Apply at 10 day intervals. An application of 100mL per 100L water prior to harvest will also disinfect foliage of pathogenic organisms such as <i>E. coli</i> .
Cut flowers: Carnation, Chrysanthemum, Gypsophila, Outdoor Roses.	50 – 100mL	First application after transplant of seedlings. Apply at 7 – 10 day intervals.
Greenhouse grown Roses:	50mL	Apply at 7 – 10 day intervals.
Wine Grapes:	50 – 100mL	First application when young shoots have reached length of 10cm. Apply at 14 days intervals.
Table Grapes:	50mL	First application after full bloom. Apply at 14 days intervals.
Deciduous fruit:	50mL	Can be applied from before bud stage through growing season with 14 day intervals.
Subtropical fruit and Citrus:	100mL	Can be applied during any growing stage at 14 day intervals. For citrus, to decrease the overall post harvest decay pathogen load, apply a full cover spray up to 7 days before harvest.
Post-harvest orchard hygiene of Deciduous fruit, Citrus, Subtropical fruit, Table and Wine grapes.	100mL	Apply after harvest to decrease orchard pathogen population as well as shortly before leaf drop to decrease the overwinter pathogen population. Apply at high spray volumes to ensure thorough wetting of foliage and stems.
Seedling & Nursery stock:	25mL	First application after first true leaf expansion. Apply at 7 day intervals.

QA-Kill

Reg. No.: ACT29GNR529/243642/040/344

LANDBOUKUNDIGE ONTSMETTINGSMIDDEL / PLANT SANITEERDER

'n Kontak dodende vloeibare landboukundige ontsmettingsmiddel en plantsaniteerder aktief teen patogeeniese mikro-organismes / bakterieë.

AKTIEWE BESTANDDEEL:

Didesieldimetielammonium chloried 150g/L
(Kwaternêre ammoniumverbinding)

VERSPREI DEUR:

Hygrotech South Africa (Pty) Ltd

Reg. No. 1973/013885/07

Gerhard Braak Str 1, Pyramid

Posbus 17220 • Pretoria Noord • 0116

Tel.: (012) 545 8000 • Faks.: (012) 545 8088

GEREGISTREER DEUR:

ICA International Chemicals (Pty) Ltd.

Reg. No.: 2001/013319/07

Posbus 2312 ♦ STELLENBOSCH ♦ 7601 ♦ Suid-Afrika

VERSIGTIG

ALGEMENE INLIGTING

- ▶ **QA-Kill** se stabiliteit en werking is nie pH afhanklik nie en kan in kunsmis verrykte besproeiingswater gebruik word.
- ▶ **QA-Kill** bly aktief solank dit in oplossing is.
- ▶ **QA-Kill** beskik oor benutting eienskappe.

ALGEMENE INSTRUKSIES

- ▶ Moenie **QA-Kill** saam met gekonsentreerde anioniese produkte gebruik nie.
- ▶ Die ontsmettingsmiddel, **QA-Kill** kan as plantsaniteerder gebruik word om die plantpatogeeniese populasie op plantoppervlaktes te verlaag, sonder enige residuele nawerking. Gebruik **QA-Kill** as oorhoofse bespuiting om plantoppervlaktes te saniteer: Dien 500 – 1500L *sputmengsel* per hektaar toe - afhangelende van die plantgrootte. (Hoër volumes per hektaar is nodig vir boomgewasse.) Verseker deeglike bedekking van beide blaaroppervlaktes. **BELANGRIK:** Sluit **QA-Kill** in by normale swamdoder spuitprogram vir effektiewe siekte beheer.
- ▶ **BELANGRIK:** Ten spyte van verskeie fitotoksiese proewe wat gedoen is, is dit onmoontlik om alle kultivars se sensitiviteit teenoor **QA-Kill** te evalueer. Dit word aanbeveel om kultivars bekend vir sensitiviteit teenoor landbouchemikalieë eers te toets voordat produk grootskaals gebruik word.
- ▶ Die gebruik van **QA-Kill** in na-oesbederf dompelbaddens dra by tot effektiewe siekte beheer deurdat na-oesbederf patogene in dompelbaddens en op vrugoppervlaktes gedood word tydens behandeling. **BELANGRIK: QA-Kill** het geen residuele nawerking nie. Vir effektiewe siekte beheer moet geregistreerde swamdoders nog steeds gebruik word. **Moenie vrugte tydens enige onderbreking in dompelbad laat nie, dit kan vrugbrand op sensitiewe vrugte veroorsaak.**
- ▶ **QA-Kill** moenie in warmwater swamdoder baddens gebruik word *nie, dit kan vrugbrand op sensitiewe vrugte veroorsaak.*
- ▶ Skud voor gebruik.

WAARSKUWINGS

- ▶ Skadelik indien ingesem word, MOENIE spuitnewel inasem nie.
- ▶ Skadelik indien produk gesluk word, MOENIE die produk drink nie.
- ▶ Die **onverdunde produk** kan ernstige vel irritasie veroorsaak, voorkom kontak met vel.
- ▶ Risiko vir ernstige skade aan oë (korrosief vir die oog), voorkom kontak met oë.
- ▶ Giftig vir visse en ander waterorganismes.
- ▶ Hou buite bereik van kinders, oningeligte persone en diere.
- ▶ Berg in 'n koel, droë plek weg van voedsel, voer en drinkwater.

Herbetredingsinterval: Moet nie behandelde gebied binnegaan voordat die spuitnewel afgesak het en oppervlakte droog is nie tensy beskermende oorklere en gesigmasker 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

- ▶ Voorkom inaseming van sproei of missproei, dra 'n gesigmasker. **Indien inaseming plaasvind**, verwyder die persoon na vars lug en hou persoon rustig. Persone met long toestande moet areas vermy terwyl bespuitings toegedien word.
- ▶ Voorkom kontak met **onverdunde produk**, dra rubber handskoene. Indien in kontak met vel, was met water en seep.
- ▶ Voorkom kontak met oë, dra chemiese beskerming brille of gesigskerm. Indien in kontak met oë, spoel oog onmiddellik uit met lopende water vir 15 minute en kry onmiddellik mediese hulp.
- ▶ Indien produk gesluk word, moenie braking forseer nie, kry onmiddellik mediese hulp.
- ▶ Vermoed waai van spuitnewel na riviere of damme en areas wat nie onder behandeling is nie..
- ▶ Na gebruik, maak toediener deeglik skoon en gooi waswater waar dit nie gewasse, weiding, riviere of damme sal besoedel nie.
- ▶ Spoel leë houers deeglik uit voordat dit weggegooi word. Leë houers moet nie verbrand word nie. MOENIE die leë houers vir enige ander doel hergebruik nie.

GEBRUIKSAANWYSINGS

GEBRUIK SLEGS SOOS AANGEDUI

ONTSMETTING OF SANITERING VAN:	DOSIS PER 100 L WATER	OPMERKINGS
DOMPELTENKE (koue water): Behandel water in dompeltenke tydens na-oes behandeling asook die volgende vrugte en groente-oppervlaktes: Aartappel, Appel, Aspersie, Avokado, Blomkool, Botterskorsie, Brokkoli, Brussels, Koejawel, Mango, Pampoen, Papaja, Pere, Persimmon, Prei, Rolet skorsie, Soetstrissies, Sitrus, Soetpatat, Spanspek, Suikermielie en Tamatie.	100 – 150mL	Doop vir 5 minute. Tydens hewige vermenging (bv. Verkoelingseenhede) vind skuimvorming plaas; gebruik anti-skuim produk bv. Foam Fighter om skuimvorming te verminder. Vervang QA-Kill oplossing sodra dit te vuil is. Sien ook "Algemene Inligting".
Na-oes doop van blombolle vir opberging.	100 – 150mL	Gebruik as 'n "uitklop" aksie saam met 'n swamdoder vir verlengde nawerking.
Water in groeihuis "natmure":	10mL (konstante dosering)	Ontsmetting van natmure vir <u>eerste behandeling</u> ; dien 200mL per 100L water toe as skokbehandeling. Volg op met dosis soos aanbeveel.
Groei-medium (inert- of nie-organies), asook aparte bv. snoei-skêre, ploëë, hande, voetbaddens, ens.	1000mL	Maak seker dat alle oppervlaktes blootgestel word aan die QA-Kill oplossing.
Koelkamers, pakhuis, groeihuise, saailaie, en ander harde oppervlaktes soos plukkiste, ens.	150 – 200mL	Verwyder eers alle organiese materiaal vanaf oppervlaktes. Hou dan nat met QA-Kill oplossing vir 'n minimum van 10 minute vir beste resultate.
Water vir na-oesbehandeling van snyblomme in hours:	150mL	Die oplossing kan gebruik word vir 7 – 10 dae indien dit skoon gehou word. Moenie sny blomme in oplossing hou vir langer as 72 uur nie.
Toediening as oorhoofse blaarbespuiting by die volgende gewasse:		Sien ook "Algemene Instruksies"
Aarbeie, Aartappel, Aspersie, Blaarslaai, Boon (droë en groen), Ertjies, Geelwortel, Koolgewasse, Pampoengewasse, Paprika, Prei, Rissie, Seldery, Spinasie, Tamatie en Ui.	100mL	Begin toediening na uitplant van saailinge of 6 weke na saai. Dien toe met 10 dae intervalle. Ontsmet plantloof-oppervlaktes <u>voor oes</u> deur toediening van 100mL per 100L water om patogeeniese organismes, soos <i>E. Coli</i> te dood.
Sny blomme: Angelier, Krisant, Gypsophila en Tuin Rose.	50 – 100mL	Begin toediening na uitplant van saailinge. Dien toe met 7 - 10 dae intervalle.
Groeihuis-verboude-Rose:	50mL	Dien toe met 7 - 10 dae intervalle.
Wyndruive:	50 – 100mL	Dien eerste bespuiting toe wanneer jong lote 'n lengte van 10cm bereik het. Dien toe met 14 dae intervalle.
Tafeldruive:	50mL	Eerste toediening na volblomstadium. Dien toe met 14 dae intervalle.
Sagtevrugte:	50mL	Kan toegedien word vanaf voor bot-stadium reg deur groeiseisoen met 14 dae intervalle.
Subtropiese vrugte en Sitrus:	100mL	Kan toegedien word tydens enige groeistadium met 14 dae spuit intervalle. Vir dramatiese verlagings van na-oes bederf patogene op sitrus, dien voldekspuit toe tot op 7 dae voor oes.
Na-oes boord higiëne van Sagtevrugte, Sitrus, Subtropiese vrugte en Tafel- en Wyndruive.	100mL	Dien toe na oes om patogene populasie in boord te verminder asook kort voor blaarlaf om die oorwinteringspatogeenpopulasie te verminder. Dien toe teen hoë spuitvolume om te verseker dat blare en stamme goed benat word.
Saailinge en Kwekery materiaal:	25mL	Eerste toediening na vorming van eerste ware blare. Dien toe met 7 dae intervalle.