

## ***DIMETHOATE EC***

Reg. No. / Nr. L 7940 Act No / Wet Nr 36 / 1947  
N-AR 0917

An emulsifiable concentrate systemic and contact insecticide and acaricide for the control of pests in crops as indicated.

'n Emulgeerbare konsentraat sistemiese en kontak insek- en mytdoder vir die beheer van plae in gewasse soos aangedui.

IRAC GROUP CODE E INSECTICIDE

IRAC GROEPKODE E INSEKDODER

**ACTIVE INGREDIENT:**

dimethoate.....400 g / ℓ.  
(organophosphate)

**AKTIEWE BESTANDDEEL:**

Dimetoaat.....400 g / ℓ.  
(organofosfaat)

Contents  Inhoud

Registered by / Geregistreer deur:

**MAKHRO-AGRO SA (Pty) Ltd**

Reg. No. 1994/001973/07

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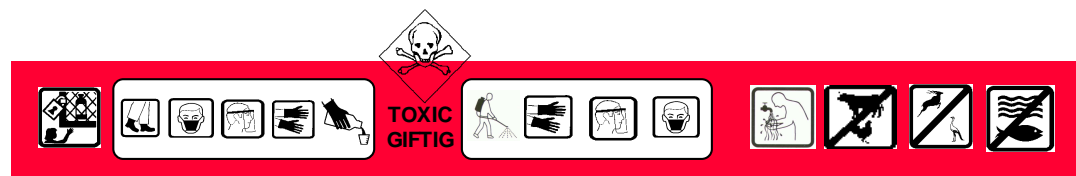
Batch. No.

Expiry date

Lotnommer

Vervaldatum

UN. No. 3017



CLASS I B

Red band

## WARNINGS:

- **Withholding periods:** Minimum number of days between last application and harvest or grazing:

Apples and pears:.....	14 days.
Citrus - soil application:.....	42 days.
Citrus - foliar application:.....	14 days.
Peaches, plums, grapes and pineapples:.....	28 days.
Cotton, grain sorghum, groundnuts, cauliflower, cabbage, beans, strawberries, potatoes, cucurbits and lucerne (grazing):.....	14 days.
Tobacco:.....	7 days.
Wheat:.....	21 days.
Barley:.....	50 days.

- Handle with extreme care.
- Harmful if swallowed, inhaled or absorbed through the skin.
- Irritating to eyes.
- Toxic to fish, bees and wildlife.
- Flammable - do not handle or store near heat or open flames.
- Keep out of reach of children, uninformed persons and animals.
- Store under lock and key away from food and feed in a cool place at temperatures below 40 °C.
- Do not use in Apricots, Rough skin lemon, Seville oranges and certain ornamentals as indicated.
- Soil application (citrus) should not be made where bromacil has been used for weed control in previous years and bromacil applications should not follow a **MAKHRO DIMETHOATE EC** soil application within 12 months.
- **In case of poisoning call a doctor and make this label available to him / her.**
- **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. Do not graze adjacent fields within 4 days.

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 soil, climatic and storage conditions; quality of dilution water, 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:

- Do not eat, drink or smoke whilst handling this product.
- Avoid contact with skin and eyes and inhalation of spray mist
- Prevent contamination of food, feed, drinking water and eating utensils.
- Wear rubber gloves, boots, mask and face shield when handling the concentrate and while spraying. If you get it in your eyes, flush it out at once. If you get it on your skin, wash it off at once. If you spill it on your clothes, change and wash them.
- Wash contaminated clothing daily.
- Invert the empty container over the spray or mixing tank and allow to drain for at least 30 seconds after the flow has slowed down to a drip. Thereafter rinse the container three times with a volume of water equal to a minimum of 10 % of that of the container. Add the rinsings to the contents of the spray tank before destroying the container.
- Destroy empty container and do not use for any other purpose.
- While spraying, avoid contact with the spray as much as you can. Avoid spray drift onto other crops, grazing rivers or dams.
- Clean applicator thoroughly after use and dispose of wash water where it will not contaminate crops, grazing, rivers or dams. Change and wash your work clothes. Wash yourself.

## Symptoms of human poisoning:

Headache, fatigue, faintness, giddiness, excessive sweating, nausea, abdominal pains, vomiting, diarrhoea, tightness of chest, anxiety, blurred vision, muscle twitching beginning in the eye lids and tongue, small pupils, respiratory distress, convulsions, coma.

## First aid treatment:

Remove patient from source of poisoning to a well ventilated area and keep him quiet and reassured. Remove contaminated clothing and rinse contaminated body area thoroughly with soap and cold water. Do not rub skin hard. Flush contamination out of eyes with clean water for at least 15 minutes. If concentrate or water diluted mixture has been swallowed, **take the person to the nearest doctor immediately**. Do not induce vomiting. Administer artificial respiration or closed chest cardiac massage if necessary. Do not apply direct mouth to mouth respiration. Never give anything by mouth to an unconscious person.

## Note to physician:

Administer atropine sulphate (1 - 4 mg) intravenously every 5 - 10 minutes until signs of atropinisation (dry, flushed skin and tachycardia) occur. Give 2 PAM at 50 mg / kg up to a total dose of 1 - 2 g or  $\frac{2}{3}$  of this dosage of Protopam. Repeat oximes if necessary. Do not give morphine. Toxogonin is contra-indicated.

## RESISTANCE WARNING (IRAC Group Code E insecticide):

### RESISTANCE WARNING:

For resistance management, **MAKHRO DIMETHOATE EC** is a group code E insecticide. Any insect population may contain individuals naturally resistant to **MAKHRO DIMETHOATE EC** and other group code E insecticides. The resistant individuals can eventually dominate the insect population if these

insecticides are used repeatedly. These resistant insects may not be controlled by **MAKHRO DIMETHOATE EC** or any other group code E insecticide.

To delay insecticide resistance:

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

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

**DIRECTIONS FOR USE:** Use only as indicated.

**Compatibility:**

**MAKHRO DIMETHOATE EC** is compatible with most modern neutral pesticides. **MAKHRO DIMETHOATE EC** is not compatible with alkaline compounds. To avoid leaf damage it should not be mixed with captab, nor applied to peaches or nectarines together with maneb or fixed copper fungicides. Do not mix with lime, lime sulphur and Bordeaux mixture. When **MAKHRO DIMETHOATE EC** is used in conjunction with any other agrochemical, full cognisance must be taken of all warnings, precautions and directions for use mentioned on that label. The compatibility of **MAKHRO DIMETHOATE EC** with other products may however be influenced by the formulation of the products involved as well as the quality of the dilution water. Since the formulation of other products may change without the knowledge of Volcano Agrosience and water quality may vary from farm to farm, a physical compatibility test should always be carried out prior to application.

**Soil application ( citrus only):**

Estimate the zone area of the trees and calculate the quantity of **MAKHRO DIMETHOATE EC** required for each tree. Dilute this amount with 5 - 10 l water and spread evenly over the drip zone area with suitable equipment e.g. watering can.

In cases of flood irrigation, **MAKHRO DIMETHOATE EC** should be added to the filled flood basins. Where sprinkler irrigation is used, **MAKHRO DIMETHOATE EC** may be applied to the dry soil under the trees, but must be followed by irrigation at once. **MAKHRO DIMETHOATE EC** may be applied to trees by means of microjet or drip irrigation.

**Mixing instructions and application:**

Add the required amount of **MAKHRO DIMETHOATE EC** to the water and stir well. No further agitation is needed. Only mix as much as is required and apply immediately. Do not use if an emulsion is not formed or if free oil appears on the surface of the emulsion. Spray plants when growing vigorously and not when they are wilted caused by drought, diseased or showing signs of any physiological abnormalities. When spraying plants or pests which are difficult to wet ( e.g. cabbage or woolly aphid) add a suitable wetting agent.

Where aerial application is prescribed, apply in 30 l water / ha. For low volume tractor application, apply in not less than 100 l water / ha. However, in potatoes apply in 200 l water / ha.

**AERIAL APPLICATION:**

Aerial application may only be done by a registered aerial application operator using a registered and correctly calibrated aircraft according to the instructions of SANS Code 10118 (Aerial Application of Agricultural Remedies). It is important to 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:

**Equipment:**

- Use suitable atomising equipment (hydraulic nozzles or rotary atomisers) that will produce the desired droplet size and coverage of the target area and will ensure the minimum loss of product through drift.
- The operator must use a nozzle set-up that will produce a droplet spectrum with the lowest possible relative span.
- All nozzles and atomisers should be positioned within the inner 75 % of the wingspan to prevent droplets from entering the wingtip vortices.

**Application parameters:**

- A minimum volume of 30 ℓ spray mixture / ha is recommended. As this product has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy nor be held responsible for any adverse effects if this product is applied aurally at a lower volume rate than recommended.
- A droplet coverage of 30 - 40 droplets / cm<sup>2</sup> must be recovered at the target.
- A droplet spectrum with a VMD of 250 - 280 micron is recommended. Ensure that the production of fine droplets, with a VMD less than 150 micron, is restricted to a minimum.
- The height of the spray boom should be maintained at between 3 and 4 m above the target.
- Do not spray when the aircraft is in a climb, at the top of a turn or during a dive or when banking.
- Apply before the crop growth becomes too dense, which will interfere with overall plant coverage.

**Meteorological conditions:**

- The difference between the wet and dry bulb readings as determined by a whirling hygrometer, must not exceed 8 °C.
- Do not spray under turbulent, unstable conditions nor during the heat of the day when rising thermals and downdraughts occur.
- Do not spray under temperature inversion conditions (spraying in or above the inversion layer).
- Do not spray when the wind speed exceeds 15 km / h.

**General:**

- Ensure that fields are accurately marked and 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.
- Prepared spray mixture must not be left in the spray tank for any length of time e.g. overnight.

<b>CROP / PEST</b>	<b>DOSAGE</b>	<b>REMARKS</b>
<b>Apples and pears.</b> Mealy bug	120 mℓ / 100 ℓ water	Apply as a high volume full cover spray. Apply 2 - 3 times from end November to early January.
<b>Cotton.</b>	800 mℓ / ha	Apply as a low volume full cover

CROP / PEST	DOSAGE	REMARKS
Aphids		ground application.
<b>Citrus. (foliar application).</b> (Do not apply to Rough lemons or Seville oranges) Aphids and Psylla	40 ml / 100 l water	Apply as a full cover spray.
Soft brown scale	100 ml / 100 l water	<b>Corrective treatment:</b> Apply as a full cover spray when pest is noticed. Apply, where possible, on a spot spray basis.
Red scale	Per 100 l water:  a) 100 ml <b>DIMETHOATE EC</b> plus 1 - 1,4 l narrow range mineral oil. <b>OR</b> b) 100 ml <b>DIMETHOATE EC</b> plus 50 ml methidathion 420 EC	<b>Corrective treatment:</b> Apply when 25 - 40 % of fruit is infested with 1 or more live nymph or adult scales. Use higher oil dosage in warm low lying areas. Will also control soft brown scale and circular purple scale.
<b>Soil application (only on Rough lemon or Empress Mandarin root stocks).</b> Aphids and Psylla	7,5 ml for every m <sup>2</sup> of root zone area. Apply a minimum of 25 mm irrigation water.	Apply at the beginning of a flush when very first signs of psylla and / or aphid activity is noticed. Apply the lower rate if mild infestations of aphids and the higher rate if more severe infestations of aphids and psylla occur. In the case of psylla a second application may be necessary 6 weeks later.
Mealy bug	15 ml for every m <sup>2</sup> of root zone area. Apply a minimum of 25 mm irrigation water.	Apply during flowering or when crawlers start moving. Will also suppress red scale if applied during this period.
<b>Apples, pears, plums and peaches.</b> <b>(Do not use in Apricots)</b> Aphids, Bryobia mite and Woolly aphid.	75 ml / 100 l water	Apply as a high volume full cover spray when pests appear. Repeat application when necessary. Use high pressure to control woolly aphid.
<b>Peaches and plums (For canning only)</b> Fruit fly	75 ml / 100 l water	Apply as a high volume full cover spray which must be directed towards the fruit. Apply at 6 and 4 weeks before harvest. Follow-up with remedies

<b>CROP / PEST</b>	<b>DOSAGE</b>	<b>REMARKS</b>
		which have a shorter withholding period.
<b>Plums</b> Mealy bug	120 mℓ / 100 ℓ water (1,8 - 4,2 / ha)	Apply as a high volume full cover spray. Repeat 2 - 3 times.
<b>Wheat</b> Russian aphid  Green and Brown aphids only	750 mℓ / ha  960 mℓ + 640 mℓ parathion 500 EC / ha 500 - 750 mℓ / ha  <b>OR</b> 300 - 500 mℓ plus 200-300 mℓ parathion 500 EC / ha	<b>Winter rainfall region only</b> and only if crop is growing actively. Aerial or low volume ground application. Will also control green and brown aphids. Aerial or low volume ground application. Use the higher rate under dry conditions. Best results are obtained if wheat is growing actively. Aerial or low volume ground application. Use the higher rate in wheat under irrigation and on dry land after the early piping stage.
<b>Grain sorghum.</b> Aphids	560 - 660 mℓ / ha	Aerial application or low volume ground application by means of a mistblower. Dosage depends on plant density and size.
<b>Groundnuts and tobacco.</b> Aphids	800 mℓ / ha	Apply at first signs of infestation and repeat as necessary. Apply as a low volume full cover ground application.
<b>Potatoes.</b> Aphids	800 mℓ / ha	Aerial or low volume ground application. Not for leaf roll virus control.
<b>Cabbage, cauliflower, beans cucurbits and strawberries.</b> Aphids	75 mℓ / 100 ℓ water	Apply as a high volume full cover spray. Apply when pest is noticed and repeat when necessary.
<b>Roses, ornamentals and flowers.</b> Aphids	75 m / 100 ℓ water	Apply as a full cover spray. Do not apply in Zinnia, Chrysanthemums, Begonia, Ficus, Jacobinia or Pride of India.
<b>Grapes</b> Mealy bug	125 mℓ / 100 ℓ water	Apply as a high volume application when pest is noticed, usually at the base of shoots during December. Thorough spraying is essential. Repeat application at 14 - 21 day intervals.
<b>Proteas.</b> Black moth	120 mℓ / 100 ℓ water	Apply as a full cover application directed at growth points and flower buds.
<b>Barley.</b> Russian aphid	750 mℓ / ha	Aerial or low volume ground application. Will also control brown and green aphids.

<b>CROP / PEST</b>	<b>DOSAGE</b>	<b>REMARKS</b>
Green and brown aphids only	500 - 750 ml / ha	Aerial or low volume ground application. Use the higher rate under dry conditions. Best results are obtained if barley is growing actively.
<b>Pineapples.</b> Mealy bug	125 ml / 100 l water	Apply 2 000 l spray mixture / ha for mature plants. Repeat if necessary. Dip plant material in mixture for 2 minutes before planting.
<b>Lucerne.</b> Black sand mite and Earth flea	600 ml / 1 000 kg seed  150 ml / ha	<b>Seed treatment:</b> Dilute in 4 l water, mix with seed and dry. Do not inoculate treated seed within 8 days after treatment. Do not sow seed later than 8 weeks after treatment. Will only provide control during period of establishment.  <b>Spray application:</b> Apply when pest appears in a minimum of 250 l water / ha.

## WAARSKUWINGS:

- **Onthoudingsperiodes:** Minimum aantal dae tussen laaste toediening en oes of beweiding.

Appels en pere:.....	14 dae.
Sitrus - grondtoediening:.....	42 dae.
Sitrus - blaartoediening:.....	14 dae.
Perskes, pruime, druiwe en pynappels:.....	28 dae.
Katoen, graansorghum, grondbone, blomkool, kopkool, bone, aarbeie, aartappels, pampoengewasse en lusern (beweiding).....	14 dae.
Tabak:.....	7 dae.
Koring:.....	21 dae.
Gars:.....	50 dae.

- Hanteer uiters versigtig.
- Skadelik indien ingeneem, ingeasem of deur die vel geabsorbeer word.
- Irriterend vir die oë.
- Giftig vir visse, bye en natuurlewe.
- Vlambaar - moet nie naby hitte of oop vlamme berg of hanteer nie.
- Hou buite bereik van kinders, oningeligte persone en diere.
- Berg agter slot en grendel weg van voedsel en voer in 'n koel plek by temperature onder 40 °C.
- Moet nie in appelkose, growweskijsuurlemoene, Seville lemoene en sekere sierplante soos aangedui, toedien nie.
- Grondtoediening (sitrus) moet nie gedoen word waar bromasil in vorige jare vir onkruidbeheer toegedien is nie en bromasil-toedienings moet nie 'n **MAKHRO DIMETHOATE EC** grondtoediening binne 12 maande opvolg nie.
- **In geval van vergiftiging, ontbied 'n geneesheer en toon hierdie etiket aan hom / haar.**
- **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 water of aangrensende gebiede spuit of die spuitstof toelaat om dit te besoedel nie. Moet nie aangrensende landerye binne 4 dae laat bewei nie.

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 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 'n gebrek aan prestasie van die betrokke middel 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 in die geval van enige onsekerheid.

## VOORSORGMAATREËLS:

- Moet nie eet, drink of rook terwyl die produk hanteer word nie.
- Vermoed besoedeling van voedsel, voer, drinkwater en eetgerei.
- Dra rubberhandskoene en gesigskerm wanneer die konsentraat hanteer word en tydens toediening. Indien dit in u oë kom, spoel onmiddellik uit. Indien dit op u vel kom, was dit dadelik af. Indien dit op u klere mors, trek uit en was dit.
- Keer die leë houër om oor die spuit- of mengtenk en dreineer vir minstens 30 sekondes nadat die vloeï tot 'n gedrup verminder het. Spoel die houër daarna driekeer uit met 'n volume water gelykstaande aan 'n minimum van 10 % van die inhoud van die houër. Gooi die spoelwater by die inhoud van die spuittenk voordat die houër vernietig word.
- Vermoed kontak met die spuitstof sover moontlik tydens toediening. Vermoed oorwaai van spuitnewel na ander gewasse, weiding, riviere of damme.
- Maak toediener deeglik skoon na gebruik en gooi waswater waar dit nie gewasse, weiding, riviere of damme sal besoedel nie. Vernietig leë houër en moet dit nie vir enige ander doel gebruik nie. Trek werksklere uit en was dit. Was uself.

## Simptome van menslike vergiftiging:

Hoofpyn, moegheid, duiseligheid, oormatige sweet, naarheid, maagpyn, braking, diarree, bekleemde bors, angs, versteurde gesigsvermoë, spiertrekkings beginnende in die ooglede en tong, verkleinde pupille, stuiptrekkings, asemhalingsnood, bewusteloosheid, koma.

## Noodhulpbehandeling:

Verwyder die persoon van die bron van vergiftiging na 'n koel en goed geventileerde omgewing, hou hom stil en stel hom gerus. Verwyder besoedelde klere en was besoedelde liggaamsdele met seep en koue water af. Moet nie die vel hard vryf nie. Besoedelde oë moet vir 15 minute met skoon water uitgespoel word. Indien die konsentraat of waterverdunde mengsel gedrink is, **neem die pasiënt dadelik na die naaste geneesheer**. Pas kunsmatige asemhaling of geslote hartmassering toe indien nodig. Moet nie direkte mond-tot-mond-asemhaling toepas nie. Moet nie iets per mond aan 'n bewustelose persoon gee nie.

## Nota aan geneesheer:

Dien atropiensulfaat ( 1 - 4 mg) elke 5 - 10 minute binne-aars toe tot die eerste tekens van atropinisasie (droë, gloeiende vel en tagikardie) voorkom. Gee 2 PAM teen 50 mg / kg tot 'n totale dosis van 1 - 2 g of  $\frac{2}{3}$  van hierdie dosis Protopam. Herhaal toediening van oksieme indien nodig. Moet nie morfien toedien nie. Toxogonin mag nie gebruik word nie.

## WEERSTANDSWAARSKUWING (IRAC groepkode E insekdoder)

### WEERSTANDSWAARSKUWING:

**MAKHRO DIMETHOATE EC** is 'n groepkode E insekdoder. Enige populasie van 'n spesifieke insek mag individue insluit wat 'n natuurlike weerstand teen **MAKHRO DIMETHOATE EC** of enige ander groepkode E insekdoders het. Indien hierdie insekdoders herhaaldelik aangewend word, kan die weerstandbiedende individue uiteindelik die insekpopulasie oorheers. Hierdie weerstandbiedende insekte sal waarskynlik nie deur **MAKHRO DIMETHOATE EC** of enige ander groepkode E insekdoder beheer word nie.

Om weerstand teen insekdoders te vertraag:

- Vermy die eksklusiewe herhaaldelike gebruik van insekdoders met dieselfde groepkode. Wissel af met, of gebruik tenkmengsels van produkte in verskillende insekdodergroepkodes.
- Integreer ander beheermaatreëls (chemies, verbouing, biologies) in insekdoderprogramme.

**Vir spesifieke inligting oor weerstandsbestuur kontak die registrasiehouer van hierdie produk.**

**GEBRUIKSAANWYSINGS:** Gebruik slegs soos aangedui.

### **Verenigbaarheid:**

**MAKHRO DIMETHOATE EC** is verenigbaar met die meeste moderne neutrale plaagbeheer-middels. **MAKHRO DIMETHOATE EC** is nie verenigbaar met alkaliese verbindings nie. Om blaarbeskadiging te voorkom, moet **MAKHRO DIMETHOATE EC** nie in 'n mengsel met kaptab toegedien word nie. Dit mag ook nie saam met maneb of gebonde koperswamdoders in perskes en nektariens toegedien word nie. Moet nie met kalkswael of Bordeaux-mengsel meng nie. Wanneer **MAKHRO DIMETHOATE EC** saam met enige ander middel in 'n tenkmengsel toegedien word, moet gelet word op die waarskuwings, voorsorgmaatreëls en gebruiksaanwysings op daardie etiket. Die verenigbaarheid van **MAKHRO DIMETHOATE EC** met ander middels mag beïnvloed word deur die formulering van die betrokke middel sowel as die kwaliteit van die verdunningswater. Aangesien die formulering van ander middels mag verander sonder die medewete van Volcano Agrosience en die kwaliteit van die water van plaas tot plaas kan verskil, moet 'n fisiese verenigbaarheidstoets altyd uitgevoer word voor toediening.

### **Grondtoediening (slegs sitrus):**

Bepaal die oppervlakte van die druparea van die bome en bereken die hoeveelheid **MAKHRO DIMETHOATE EC** wat benodig word per boom. Verdun hierdie hoeveelheid met 5 - 10 ℓ water en versprei dit egalig met 'n geskikte toestel (bv. 'n gieter) oor die druparea. In die geval van vloedbesproeiing, dien **MAKHRO DIMETHOATE EC** toe nadat die vloedbakke gevul is. Waar sprinkelbesproeiing gebruik word, kan **MAKHRO DIMETHOATE EC** op die droë grond toegedien word maar moet onmiddellik met besproeiing opgevolg word. **DIMETHOATE EC** kan ook deur middel van drup- of mikrobesproeiing toegedien word.

### **Menginstruksies en toediening:**

Voeg die benodigde hoeveelheid **MAKHRO DIMETHOATE EC** in die water en roer deeglik. Daarna is dit nie nodig dat die mengsel weer geroer word nie. Meng slegs die hoeveelheid wat benodig word en dien dit dadelik toe. Moet nie toedien indien dit nie 'n emulsie vorm nie of indien vry olie op die oppervlak van die emulsie voorkom. Dien toe wanneer die plante sterk en aktief groei, maar nie wanneer hulle verlep is, onder droogte stremming verkeer, siektesimptome of enige fisiologiese abnormaliteite toon nie. Vir plante en plae wat moeilik benat word, bv. kool en appelbloedluis, voeg 'n benattingsmiddel by die spuitmengsel.

### **LUGTOEDIENING:**

Lugtoediening mag slegs deur 'n geregistreerde lugbespuitingsoperateur met 'n geregistreerde en korrek gekalibreerde vliegtuig volgens instruksies van SANS Kode 10118 ("Aerial Application of Agricultural Remedies") gedoen word. Dit is belangrik om te verseker dat die spuitmengsel eweredig oor die

teikenarea versprei word en dat die verlies aan spuitmengsel tydens toediening tot die minimum beperk word. Die volgende kriteria moet nagekom word.:

### **Toerusting:**

- Gebruik geskikte atomiseringsapparaat (hidroliese of roterende spuitkoppe) wat die vereiste druppelgrootte en bedekking van die teiken sal produseer, maar wat die minste verlies van produk deur wegdrywing sal verseker.
- Die operateur moet 'n spuitstelsel gebruik wat 'n druppelspektrum met die kleinste moontlike relatiewe span sal produseer.
- Al die spuitkoppe en atomiseerders moet in die binneste 75 % van die vlerkspan geplaas word om die beweging van druppels in die vlerkvorteks in te beperk.

### **Toedieningsvereistes:**

- 'n Minimum volume van 30 ℓ spuitmengsel / ha word aanbeveel. Aangesien hierdie produk nie teen 'n verlaagde spuitvolume getoets is nie, kan die registrasiehouer nie effektiwiteit waarborg of verantwoordelik gehou word vir enige nadelige effek indien hierdie produk teen 'n laer volume as hierbo aanbeveel, uit die lug toegedien word nie.
- 'n Druppelbedekking van 30 - 40 druppels / cm<sup>2</sup> moet op die teikenarea herwin word.
- 'n Druppelspektrum met 'n VMD van 250 - 280 mikron word aanbeveel. Verseker dat die produksie van fyn druppels, die wat kleiner as 150 mikron is, tot 'n minimum beperk word.
- Die hoogte van die spuitbalk moet tussen 3 en 4 m bo die teiken gehandhaaf word.
- Moet nie spuit wanneer die vliegtuig aan die bopunt van 'n draai is of tydens 'n duik of terwyl dit uitklim of draai nie.
- Dien toe voordat die gewas te ruig word aangesien die druppelbedekking op die plante verminder sal word.

### **Meteorologiese toestande:**

- Die verskil tussen die nat- en droëbollesing, soos met 'n swaaihygrometer bepaal, moet nie 8 °C oorskry nie.
- Moenie toedien tydens turbulente en onstabiele weerstoestande of gedurende die hitte van die dag wanneer stygende en dalende konveksie windbeweging plaasvind nie.
- Moenie toedien onder temperatuur inversie toestande (deur bo of binne die inversielaag te spuit) nie.
- Moenie spuit indien die windspoed 15 km / u oorskry nie.

### **Algemeen:**

- Verseker dat die lande akkuraat gemerk is en dat die spuitoperateur presies weet watter lande gespuit moet word.
- Verkry versekering van die spuitoperateur dat aan bogenoemde vereistes voldoen sal word.

Aangemaakte spuitoplossing moenie onnodig oorstaan nie, veral nie oornag nie.

<b>GEWAS / PLAAG</b>	<b>DOSIS</b>	<b>OPMERKINGS</b>
<b>Appels en pere.</b> Witluis	120 ml / 100 ℓ water	Dien toe as 'n hoëvolume volle dekhoediening. Dien 2 - 3 keer toe vanaf einde November tot vroeg Januarie.
<b>Katoen.</b> Plantluis	800 ml / ha	Grondtoediening. Dien toe as 'n laevolume volle dekhoediening.
<b>Sitrus. (blaartoediening)</b> (Moet nie in growweskil-suurlemoene of Seville lemoene toedien nie). Plantluis en Silla	40 ml / 100 ℓ water	Dien toe as 'n volle dekhoediening.
Sagtebruindopluis	100 ml / 100 ℓ water	<b>Korrektiewe behandeling:</b> Dien toe as 'n volle dekhoediening sodra plaag opgemerk word. Dien sover moontlik as 'n kolbehandeling toe.
Rooidopluis	Per 100 ℓ water: a). 100 ml <b>DIMETHOATE EC</b> plus 1 - 1,4 ℓ smalbestek minerale olie.  <b>OF</b> b). 100 ml <b>DIMETHOATE EC</b> plus 50 ml metidation 420 EC 7,5 ml vir elke m <sup>2</sup> wortelsoon-area. Dien 'n minimum van 25 mm besproeiingswater toe.	<b>Korrektiewe behandeling:</b> Dien toe wanneer 25 - 40 % vrugte geïnfesteer is met 1 of meer lewendige nimfe of volwasse dopluis. Gebruik die hoër dosis olie in warm laagliggende gebiede.  Sal ook rondepersdopluis en sagtebruindopluis beheer.
<b>Grondtoediening</b> (slegs in growweskil-suurlemoene of Empress Mandarin onderstamme) Plantluis en Silla		Dien toe aan die begin van nuwe blaargroei wanneer die eerste tekens van silla- en / of plantluisaktiwiteit opgemerk word. Dien die laer dosis toe vir 'n ligte infestasië van plantluis en die hoër dosis waar 'n strawwe infestasië van plantluis en silla ondervind word. In die geval van silla mag 'n tweede toediening 6 weke later nodig wees.
Witluis	15 ml vir elke m <sup>2</sup> wortelsoon-area. Dien 'n minimum van 25 mm besproeiingswater toe.	Dien toe gedurende blom of wanneer kruipers begin beweeg. Sal ook rooidopluis onderdruk indien gedurende hierdie periode toegedien word.
<b>Appels, pere, perskes en pruime.</b> (Moet nie in appelpose	75 ml / 100 ℓ water	Dien toe as 'n hoëvolume volle dekhoediening. Dien toe wanneer plaë voorkom en herhaal soos nodig.

<b>GEWAS / PLAAG</b>	<b>DOSIS</b>	<b>OPMERKINGS</b>
<b>toedien nie).</b> Plantluise, Bryobiamyt en Bloedluis		Bespuit teen hoë druk vir die beheer van bloedluis.
<b>Perskes en pruime.</b> <b>(Slegs vir inmaak)</b> Vrugtevlieg	75 ml / 100 ℓ water	Dien toe as 'n hoëvolume volle dektoediening en rig bespuiting na die vrugte. Dien toe 6 en 4 weke voor oes. Volg op met middels wat 'n korter onthoudingsperiode het.
<b>Pruime.</b> Witluis	120 ml / 100 ℓ water (1,8 - 4,2 ℓ / ha)	Dien toe as 'n hoëvolume volle dektoediening. Herhaal 2 - 3 keer.
<b>Koring.</b> Rusiese luis	750 ml / ha	<b>Slegs winterreënvalgebied</b> en slegs as gewas aktief groei. Lugtoediening of laevolume grondtoediening. Sal ook bruin- en groenplantluis beheer.
Slegs Groen- en bruinplantluis	960 ml + 640 ml paration 500 EC / ha.  500 - 750 ml / ha	Dien toe as 'n laevolume grondtoediening of lugtoediening. Gebruik die hoër dosis onder droë toestande. Vir goeie resultate moet die gewas aktief groei.
	<b>OF</b> 300 - 500 ml + 200 - 300 ml paration 500 EC / ha	Lugtoediening of laevolume grondtoediening. Dien die hoër dosis in koring onder besproeiing toe en op droëlandkoring na die vroeë pypstadium.
<b>Graansorghum.</b> Plantluise	560 - 660 ml / ha	Lugtoediening of laevolume grondtoediening (newel). Dosis hang af van plantdigtheid en -grootte.
<b>Grondbone en tabak.</b> Plantluise	800 ml / ha	Dien toe sodra die eerste insekte verskyn en herhaal indien nodig. Dien toe as 'n laevolume grondtoediening. Dien toe as 'n volle dektoediening.
<b>Aartappels.</b> Plantluise	800 ml / ha	Dien toe as 'n laevolume grondtoediening of lugtoediening. Nie vir blaarrolvirusbeheer nie.
<b>Kopkool, blomkool, bone, pampoengewasse en aarbeie.</b> Plantluise	75 ml / 100 ℓ water	Dien toe as 'n hoëvolume volle dektoediening. Dien toe wanneer plaag opgemerk word en herhaal wanneer nodig.
<b>Sierplante, rose en blomme.</b> Plantluise	75 ml 100 ℓ water	Dien toe as 'n volle dektoediening. Moet nie in Begonia, Ficus-soorte, Jacobinia, Jakopregop, Krisante, Wildevye en Skubliesroos toedien nie.
<b>Druive.</b> Witluis	125 ml / 100 ℓ water	Dien toe as 'n hoëvolume toediening sodra plaag opgemerk word, gewoonlik

GEWAS / PLAAG	DOSIS	OPMERKINGS
		by die basis van die lote gedurende Desember. Deeglike bedekking is noodsaaklik. Herhaal toediening met 14 - 21 dae tussenposes.
<b>Proteas.</b> Swartmot	120 ml / 100 ℓ water	Dien toe as 'n volle dekhoediening en rig bespuiting na die groeipunte en blomknoppe.
<b>Gars.</b> Rusiese luis  Slegs Groen- en bruinplantluis	750 ml / ha  500 - 750 ml / ha	Dien toe as 'n laevolume grondtoediening of lugtoediening. Sal ook groen- en bruinplantluis beheer.  Dien toe as 'n laevolume grondtoediening of lugtoediening. Gebruik die hoër dosis onder droë toestande. Beste resultate sal verkry word wanneer die gars aktief groei.
<b>Pynappels.</b> Witluis	125 ml / 100 ℓ water	Dien 2 000 ℓ spuitmengsel / ha vir volgroeide plante toe. Herhaal indien nodig. Doop plantmateriaal vir 2 minute in mengsel voor uitplant.
<b>Lusern.</b> Swartsandmyt en erdvlooi	600 ml / 1 000 kg saad  150 ml / ha	<b>Saadbehandeling:</b> Verdun in 4 ℓ water, meng met die saad en maak dit droog. Moet nie behandelde saad binne 8 dae na behandeling inent nie. Moet nie saad later as 8 weke na behandeling saai nie. Sal slegs beheer verskaf gedurende die vestigingsperiode. <b>Spuitbehandeling:</b> Dien toe wanneer plaag verskyn in 'n minimum van 250 ℓ water / ha.