



# KLARTAN<sup>®</sup> 240 EW

Reg. no. L5096 Act/Wet 36 of/van 1947  
N-AR 0916

A stomach and contact insecticide emulsion for the control of pests in apples, canola, citrus, macadamias, pears, peaches, plums, prunes, tomatoes and wheat as indicated. 'n Kontak- en maaginsekdoder emulsie vir die beheer van plae in appels, kanola, koring, makadamias, pere, perskes, pruime, pruime-dante, sitrus en tamaties soos aangedui.

**IRAC INSECTICIDE GROUP CODE**                      **3A**                      **IRAC INSEKDODER GROEPKODE**

## ACTIVE INGREDIENT/AKTIEWE BESTANDDEEL

tau-fluvalinate (pyrethroid) ..... 240 g/L ..... tau-fluvalinaat (piretroïed)

## NET VOLUME/NETTO VOLUME

..... L

## REGISTRATION HOLDER/REGISTRASIEHOUER

ADAMA South Africa (Pty.) Ltd.  
Reg. no. 1992/001741/07  
Ground Floor, Simeka House  
The Vineyards Office Estate, 99 Jip de Jager Drive  
Bellville, 7530  
T: +27 21 982 1460 F: +27 21 982 5810  
infocpt@adama.com

## CONTACT IN EMERGENCY/KONTAK IN NOOD

Griffon Poison Information Centre: +27 82 446 8946  
Tygerberg Poison Information Centre: +27 861 555 777

**KLARTAN<sup>®</sup> is the registered trademark of a company of the ADAMA GROUP.  
KLARTAN<sup>®</sup> is die geregistreerde handelsmerk van 'n maatskappy van die ADAMA GROEP.**

Batch number ..... Lotnommer  
Date of manufacture ..... Datum van vervaardiging

UN no.: 3082



## WARNINGS

**Withholding periods** (minimum number of days between last application and harvest):

<b>Apples, pears, peaches, plums and prunes</b> .....	60 days
<b>Canola</b> .....	20 days
<b>Citrus</b> .....	43 days
<b>Macadamias</b> .....	30 days
<b>Tomatoes</b> .....	2 days
<b>Wheat</b> .....	38 days

- Do not graze wheat fields that have been treated with **KLARTAN® 240 EW**.
- Keep out of reach of children, uninformed persons and animals.
- Harmful when inhaled, swallowed or absorbed through the skin.
- **Re-entry interval:** Do not enter treated field within one day after application unless wearing protective clothing.
- This product must be kept in its original, properly labeled container, well-sealed and stored in a cool, dry and well ventilated place away from food, feed and eating utensils.
- This product is not toxic to honey bees, but is toxic to fish.
- Do not apply **KLARTAN® 240 EW** when bees are active.
- **Aerial application:** Notify all inhabitants in the immediate vicinity of the area to be sprayed and issue the necessary warnings. Do not apply over water or adjacent areas or allow the spray drift to contaminate it.

**Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not guarantee that it will be effective under all conditions. The activity 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 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 humans or animals, or for lack of performance of the remedy concerned due to failure of the user to follow 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 APPLY WHEN WEATHER CONDITIONS FAVOUR DRIFT ONTO OTHER CROPS, GRAZING, RIVERS, DAMS AND AREAS NOT UNDER TREATMENT.**
- Do not contaminate drinking water, food, eating utensils or feed.
- Do not apply where run-off is likely to occur.
- Avoid contact of the product with eyes and skin. In case of accidental contact, wash contaminated parts of the body immediately with water and soap.
- Wear rubber gloves and face shield during mixing and application.
- Do not smoke, drink or eat during mixing and application or before washing hands and face.
- Avoid inhalation of the spray mist.

- At the end of measuring and application, change clothes and wash hands and face thoroughly.
- Clean equipment and wash clothing separately from ordinary clothes.
- 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 empty container three times with a volume of water equal to a minimum of 10 % of that of the container. Add the rinsate to the contents of the spray tank and destroy the container by perforation and flattening.
- Never re-use empty container for any other purpose.
- Clean applicator thoroughly after use and dispose of wash water where it will not contaminate crops, grazing, rivers, dams or other non-target areas.
- In case of spillage or leakage, soak up with soil or other absorbent materials and dispose of at any approved waste disposal facility.

## RESISTANCE WARNING

For resistance management, **KLARTAN® 240 EW** is classified as a group code 3A insecticide. Any insect population may contain individuals naturally resistant to **KLARTAN® 240 EW** and other group code 3A insecticides. The resistant individuals can eventually dominate the insect population if these insecticides are used repeatedly. These resistant insects may not be controlled by **KLARTAN® 240 EW** or any other group code 3A 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 programs.

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

Resistance of American bollworm (*Helicoverpa armigera*) to synthetic pyrethroids has been confirmed. For the control of a pest, DO NOT apply more than two applications of **KLARTAN® 240 EW** per growing season. If a pyrethroid gives poor performance, DO NOT re-spray with any synthetic pyrethroid, even at a corrective dosage rate. Use a product from a different chemical group.

Reports of resistance of thrips (*Scirtothrips aurantii*) in citrus against synthetic pyrethroids have also been received. Do not use **KLARTAN® 240 EW** for thrips control in areas where resistance of thrips against synthetic pyrethroids occurs.

## DIRECTIONS FOR USE

**Use only as indicated.**

### Compatibility

The compatibility of **KLARTAN® 240 EW** with other products may 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 ADAMA South Africa (Pty.) Ltd. and the quality of water may vary from farm to farm, a physical compatibility test should always be carried out prior to application. **KLARTAN® 240 EW** is compatible with: **KAPTAN WP** (Reg. no. L1248), **METEOR** (Reg. no. L3506), **KELPAK** (Reg. no. L2414), **ANVIL** (Reg. no. L3505), **OCTAVE** (Reg. no. L3406), **BAYCOR** (Reg. no. L32), **NOVEL** (Reg. no. L4858), **BUMPER** (Reg. no. L6034), **NIMROD** (Reg. no. L1117), **SOLUBOR** (Reg. no. B699), **ZINCOXIDE** (Reg. no. B2383), **MANGANESE SULPHATE** (Reg. no. B2223), **AGRAL 90** (Reg. no. L2987) and **NUTRISOL** (Reg. no. K439).

Do not use **KLARTAN® 240 EW** with any spray oil or highly alkaline materials.

Do not mix **KLARTAN® 240 EW** with **NISSORUN 100 WP** (Reg. no. L3561).

## Mixing instructions

### Preparation of spray mixture

- Half fill the spray tank with clean water. Measure out the required amount of **KLARTAN® 240 EW** and pre-mix with approximately 10 l water. Add this to the bulk of the water in the spray tank while stirring. Fill the spray tank to the required level with water and continue agitation before and during spraying.
- For tank mixtures with other products, half fill the tank with water and add the required quantity of **KLARTAN® 240 EW** and agitate. Then add the tank mix partner, following its label instructions for preparation, and agitate again. Continue agitation while adding more water to achieve the required spray volume.
- The use of alkaline water with a pH > 7 is known to reduce the efficacy of products.
- Use a suitable buffer where such conditions exist.

## Application techniques

### Ground application

**KLARTAN® 240 EW** can be applied with conventional spraying equipment delivering medium to fine droplets. Calibrate the equipment before application to ensure that the correct dosage is applied. The spray mixture must be applied evenly over the target area.

### Aerial application

Aerial application of **KLARTAN® 240 EW** may only be done by a registered Aerial Application Operator using a correctly calibrated, registered aircraft according to the instructions of SANS 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 30 L/ha 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 aurally at a lower volume rate than recommended above.
- **Droplet coverage:** 30–40 droplets/cm<sup>2</sup> must be recovered at the target area.
- **Droplet size:** A droplet spectrum with a VMD of 250–280 micron is recommended. Limit the production of fine droplets less than 150 micron (high drift and evaporation potential) to a minimum.
- **Flying height:** Maintain the height of the spray boom at 3–4 m 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 60–75 % 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.

### Application timing

Generally, speed of crop growth, climatic variation and pest behaviour determine treatment needs.

To prevent damage, applications must start as soon as possible according to programmes based on monitoring or on local warning advice.

### APPLICATION RATES

CROP AND TARGET	DOSAGE	REMARKS
<b>Apples and pears</b> Antestia bug <i>(Antestiopsis orbitalis)</i> Fruit nibbler <i>(Prasoidea sericea)</i> American bollworm <i>(Helicoverpa armigera)</i>	<b>High volume</b> 30 ml/100 L water	Apply at a rate of 2500–3500 L spray mixture per hectare as a full cover spray commencing at 30 % flowering stage. Repeat 14 days later (75 % petal drop). <b>KLARTAN® 240 EW</b> will not harm bees.
	<b>Low volume</b> 750–1 050 ml/ha	Apply as above in not less than one quarter of the spray volume used for high volume application.  <b>See warning against resistance under “warnings” above.</b>
	<b>High volume</b> 30 ml/100 L water	Apply at a rate of 2500–3500 L spray mixture per hectare as a full cover spray commencing at 75 % petal drop. Repeat at intervals of 14 to 18 days up to middle December. Antestia, fruit nibbler, red spider mite ( <i>Tetranychus urticae</i> ), European red mite ( <i>Panonychus ulmi</i> ) and aphids will also be controlled, and banded fruit weevil ( <i>Phlyctinus callosus</i> ) suppressed by these applications.  <b>NOTE:</b> At least two applications of <b>KLARTAN® 240 EW</b> are needed to control <b>red spider mite</b> .
Codling moth <i>(Cydia pomonella)</i>	<b>Low volume</b> 750–1 050 ml/ha	Apply as above in not less than one quarter of the spray volume used for high volume application.

CROP AND TARGET	DOSAGE	REMARKS
<p><b>Canola</b> Aphid (<i>Brevicoryne brassicae</i>)</p>	150 ml/ha	<p><b>Ground application</b> Apply in 250 L water per hectare as soon as aphids are noticed. Do not wait until infestations reach high levels before application is done. American bollworm will also be controlled if present at time of application (see section under resistance).</p> <p><b>Aerial application</b> Apply in at least 30 L water per hectare.</p>
<p><b>Citrus</b> Thrips (<i>Scirtothrips aurantii</i>)</p>	15–30 ml/100 L water	<p>Apply the higher rate at 70–90 % petal drop as a light cover spray to wet canopy foliage. A second application at the lower rate may be applied 4 to 5 weeks later.</p> <p>American bollworm, citrus looper, orange dog (<i>Papillio spp.</i>), psylla (<i>Trioza erytrae</i>) and aphids will be controlled if present at time of application.</p> <p><b>WARNING:</b> Do not apply <b>KLARTAN® 240 EW</b> in areas where resistance of thrips against synthetic pyrethroids occurs. <b>Refer to the note at end of the table.</b></p>
<p><b>Macadamia</b> Stinkbug (<i>Pentatomidae spp</i>) <b>MPUMALANGA ONLY</b></p>	<p><b>High volume</b> 30 ml/100 L water</p>	<p>Apply as a full cover spray in a programme of three applications with intervals of 28 days. Start the first application as soon as an average of 1.8 stinkbugs per tree are counted. This can be determined by means of the tree shake method. Commence monitoring two weeks after flowering.</p>
<p><b>Peaches, plums and prunes</b> Green peach aphid (<i>Myzus persicae</i>)</p>	<p><b>High volume</b> 30 ml/100 L water</p>	<p>Apply at a rate of 1500–2000 L spray mixture per hectare as a full cover spray, commencing application when aphids are noticed. Repeat application as necessary. Applications will also control red spider mite, Antestia, fruit nibbler and American bollworm if present during application.</p> <p><b>NOTE:</b> At least two applications of <b>KLARTAN® 240 EW</b> are needed to control red spider mite.</p>
<p><b>Tomatoes</b> American bollworm (<i>Helicoverpa armigera</i>)</p>	15 ml/100 L water	<p>Apply as a full cover spray commencing at flowering and repeat at 7-day intervals. Use 500–1000 L spray mixture per hectare depending on plant size. Programme sprays will normally control red spider mite. Should mite populations exceed threshold values, an application of a registered acaricide is recommended.</p> <p><b>See warning against resistance under “warnings” above.</b></p>

CROP AND TARGET	DOSAGE	REMARKS
<b>Wheat</b> Brown wheat ear aphid <i>(Sitobion avenae)</i> <b>WESTERN CAPE ONLY</b>	100 ml/ha	<b>Ground application</b> Apply as soon as aphids occur. <b>Aerial application</b> Apply in 30 L water per hectare.

**NOTE: KLARTAN® 240 EW** should not be used in the same thrips control programme as **MEOTHRIN** (Reg. no. L2023).

## WAARSKUWINGS

**Onthoudingsperiodes** (minimum aantal dae tussen laaste toediening en oes):

<b>Appels, pere, perskes, pruime en pruimedante</b> .....	60 dae
<b>Kanola</b> .....	20 dae
<b>Koring</b> .....	38 dae
<b>Makadamias</b> .....	30 dae
<b>Sitrus</b> .....	43 dae
<b>Tamaties</b> .....	2 dae

- Moet nie koringlande wat met **KLARTAN® 240 EW** behandel is, laat bewei nie.
- Hou buite bereik van kinders, oningeligte persone en diere.
- Skadelik indien ingeasem, ingesluk of deur die vel geabsorbeer word.
- **Herbetredingsinterval:** Moet nie behandelde land binnegaan binne een dag na toediening nie tensy beskermende klere gedra word.
- Berg hierdie produk in sy oorspronklike, geëtiketeerde houer, dig verseël en opgeberg in 'n koel, droë en goed geventileerde plek weg van voedsel, voer en eetgerei.
- Hierdie produk is nie giftig vir heuningbye nie, maar is giftig vir visse.
- Moenie **KLARTAN® 240 EW** toedien wanneer bye aktief is nie.
- **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 toelaat dat die spuitnewel dit besoedel 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. Die werking en doeltreffendheid daarvan kan beïnvloed word deur faktore soos abnormale klimaats- en bergingstoestande, kwaliteit van die verdunningswater, verenigbaarheid met ander stowwe wat nie op die etiket aangedui word 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 nadelige effek op mense of diere 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 TOEDIEN WANNEER DIE WEERSTOESTANDE GUNSTIG IS VIR DIE WEGDRYING VAN DIE SPUITNEWEL NA ANDER GEWASSE, WEIDING, RIVIERE, DAMME EN GEBIEDE WAT NIE BEHANDEL WORD NIE.**
- Moet nie drinkwater, voedsel, eetgerei of voer besoedel nie.
- Moet nie toedien waar afloop moontlik kan voorkom nie.
- Voorkom dat produk in kontak kom met oë en vel. In geval van toevallige kontak, was besoedelde liggaamsdele onmiddellik met water en seep.
- Dra rubberhandskoene en 'n gesigskerm tydens vermenging en toediening.



- Moet nie rook, drink of eet tydens vermenging en toediening of voordat hande en gesig gewas is nie.
- Voorkom inaseming van spuitnewel.
- Aan die einde van afmeting en toediening, trek werksklere uit en was hande en gesig deeglik.
- Maak toerusting skoon en was werksklere apart van ander klere.
- Keer die leë houer om oor die spuit- of mengtenk en laat toe om te dreineer vir minstens 30 sekondes nadat die vloeï tot 'n gedrup verminder het. Spoel die leë houer daarna drie keer uit met 'n volume water gelykstaande aan 'n minimum van 10 % van die inhoud van die houer. Voeg die spoelwater by die inhoud van die spuittenk en vernietig die houer deur gate daarin te maak en plat te slaan.
- Moet nooit die leë houer vir enige ander doel gebruik nie.
- Maak toerusting deeglik skoon na gebruik en doen weg met spoelwater waar dit nie gewasse, weiding, riviere, damme of ander nie-teiken gebiede sal besoedel nie.
- In geval van verspilling of lekkasie, absorbeer met grond of 'n ander absorberende materiaal en doen weg by enige goedgekeurde afval hanterings fasiliteit.

## WEERSTANDSWAARSKUWING

Vir weerstandbestuur word **KLARTAN® 240 EW** as 'n groeppkode 3A insekdoder geklassifiseer. Enige insekpopulasie van 'n spesifieke insek mag individue insluit wat 'n natuurlike weerstand teen **KLARTAN® 240 EW** of enige ander groeppkode 3A insekdoders het. Indien hierdie insekdoders herhaaldelik aangewend word, kan die weerstandbiedende individue uiteindelik die insekpopulasie oorheers. Hierdie weerstandbiedende insekte sal waarskynlik nie deur **KLARTAN® 240 EW** of enige ander groeppkode 3A insekdoder beheer word nie.

Om weerstand teen insekdoders te vertraag:

- Vermyn die eksklusiewe herhaaldelike gebruik van insekdoders met dieselfde insekdodergroeppkode. Wissel af met, of gebruik tenkmengsels van produkte in verskillende insekdodergroeppcodes.
- Integreer die beheermaatreëls (chemies, verbouing, biologies) in insekbeheer programme.

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

Weerstand van Amerikaanse bolwurm (*Helicoverpa armigera*) teen sintetiese piretroïede is bevestig.

Vir beheer van 'n plaag MOET NIE meer as twee toedienings van **KLARTAN® 240 EW** per groeiseisoen toedien nie. As 'n piretroïed swak beheer gee, MOET NIE met enige sintetiese piretroïed, selfs teen 'n korrektiewe dosis, herspuit nie. Gebruik 'n produk uit 'n ander chemiegroep.

Daar is gevalle van weerstand van blaaspootjies (*Scirtothrips aurantii*) in sitrus teen sintetiese piretroïede aangemeld. **KLARTAN® 240 EW** moet nie in gebiede waar weerstand van blaaspootjies teen sintetiese piretroïede voorkom, gebruik word nie.

## GEBRUIKSAANWYSINGS

Gebruik slegs soos aangedui.

### Verenigbaarheid

Die verenigbaarheid van **KLARTAN® 240 EW** met ander produkte kan beïnvloed word deur die formulering van die betrokke produkte asook die kwaliteit van die verdunningswater. Aangesien die formulering van produkte kan verander sonder die medewete van ADAMA South Africa (Pty) Ltd en die kwaliteit van die water ook van plaas tot plaas kan verskil, moet 'n fisiese verenigbaarheidstoets altyd uitgevoer word voor toediening. **KLARTAN® 240 EW** is verenigbaar met: **KAPTAN WP** (Reg. no. L1248), **METEOR** (Reg. no. L3506), **KELPAK** (Reg. no. L2414), **ANVIL** (Reg. no. L3505), **OCTAVE** (Reg. no. L3406), **BAYCOR** (Reg. no. L32), **NOVEL** (Reg. no. L4858), **BUMPER** (Reg. no. L6034), **NIMROD** (Reg. no. L1117), **SOLUBOR** (Reg. no. B699), **ZINCOXIDE** (Reg. no. B2383), **MANGAAN SULFAAT** (Reg. no. B2223), **AGRAL 90** (Reg. no. L2987) en **NUTRISOL** (Reg. no. K439).

**KLARTAN® 240 EW** moet nie saam met enige olie of hoogs alkaliese middels gebruik word nie.

Moet nie **KLARTAN® 240 EW** met **NISSORUN 100 WP** (Reg. no. L3561) meng nie.

### Menginstruksies

#### Vorbereiding van spuitmengsel

- Maak die spuittenk halfvol met skoon water. Meet die verlangde hoeveelheid **KLARTAN® 240 EW** af en meng dit met 10 l water. Voeg dit by die water in die spuittenk terwyl geroer word. Maak die spuittenk vol met water tot by die verlangde vlak en hou aan met roer voor en gedurende bespuiting.
- Vir 'n tenkmengsel met ander middels moet die spuittenk halfvol gemaak word met water en die verlangde hoeveelheid **KLARTAN® 240 EW** bygevoeg word terwyl geroer word. Voeg dan die ander produk by deur die produk se menginstruksies te volg en meng weer. Hou aan met roer terwyl meer water bygevoeg word tot by die verlangde spuitvolume .
- Dit is bekend dat die gebruik van alkaliese water met 'n pH > 7 die doeltreffendheid van produkte kan benadeel.
- Gebruik 'n geskikte buffer waar sulke toestande voorkom.

### Toedieningstegnieke

#### Grondtoediening

**KLARTAN® 240 EW** kan met 'n konvensionele spuitapparaat wat medium tot fyn druppels lewer, toegedien word. Kalibreer die apparaat voor toediening om te verseker dat die regte dosis gelewer word. Die spuitmengsel moet egalig oor die teikengebied toegedien word.

#### Lugtoediening

**KLARTAN® 240 EW** kan slegs deur 'n geregistreerde lugbespuitingsoperateur met 'n korrek gekalibreerde, geregistreerde vliegtuig volgens die instruksies van SANS 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 tot 'n minimum beperk word. Dit is daarom belangrik om aan die volgende vereistes te voldoen:

- **Volume:** 'n Spuitmengselvolume van 30 L/ha word aanbeveel. Aangesien hierdie produk nie teen 'n verlaagdevolume getoets is nie, kan die registrasiehouer nie effektiwiteit waarborg, of verantwoordelik gehou word vir enige nadelige effekte indien hierdie produk vanuit die lug toegedien word teen 'n laervolume as wat hierbo aanbeveel word.

- **Druppelbedekking:** 30–40 druppels/cm<sup>2</sup> moet op die teikenarea herwin word.
- **Druppelgrootte:** 'n Druppelspektrum met 'n VMD van 250–280 mikron word aanbeveel. Beperk die produksie van fyn druppels kleiner as 150 mikron (hoë drywing en verdampingspotensiaal) tot 'n minimum.
- **Vlieghoogte:** Handhaaf die hoogte van die spuitbalk bo die teiken op 3–4 m. Moet nie spuit wanneer die vliegtuig duik, uitklim of draai nie.
- Gebruik geskikte **atomiseringsapparaat** wat die vereiste druppelgrootte en bedekking sal produseer, maar die minimum verlies van produk verseker. Die spuitstelsel moet 'n druppelspektrum met die kleinste moontlike Relatiewe Span produseer.
- Plaas al die atomiseerders in die binnste 60–75 % van die vlerkspan om te verhoed dat druppels binne-in die **vlerkpuntvorteks** beweeg.
- Die verskil in **temperatuur** tussen die nat- en droëboltermometer van 'n swaaihygrometer, moet nie 8 °C oorskry nie.
- Staak bespuiting indien die **windspoed** 15 km/h oorskry.
- Staak bespuiting tydens **turbulente**, onstabiele en droë toestande gedurende die hitte van die dag.
- Bespuiting onder temperatuur **inversietoestande** (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 doeltreffendheid as gevolg van suspensie en verdamping van klein druppels in die lug (onvoldoende bedekking op teiken);
  - skade aan ander sensitiewe gewasse en/of nie-teiken areas as gevolg van wegdrywing van die spuitwolk vanaf die teikenveld.

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.

### Tyd van toediening

Oor die algemeen is dit die tempo van gewasgroei, klimaatsverskille en gedrag van die plaag wat die tyd van behandeling bepaal.

Om skade te voorkom begin toedienings so gou moontlik, in ooreenstemming met programme wat op monitering of lokale waarskuwingsaanbevelings gebaseer is.

**TOEDIENINGSHOEVEELHEDE**

GEWAS EN PLAAG	DOSIS	OPMERKINGS
<p><b>Appels en pere</b> Antestia besie (<i>Antestiopsis orbitalis</i>) Vrugteknaagbesie (<i>Prasoidea sericea</i>) Amerikaanse bolwurm (<i>Helicoverpa armigera</i>)</p> <p>Kodlingmot (<i>Cydia pomonella</i>)</p>	<p><b>Hoëvolume</b> 30 ml/100 L water</p> <p><b>Laevolume</b> 750–1 050 ml/ha</p> <p><b>Hoëvolume</b> 30 ml/100 L water</p> <p><b>Laevolume</b> 750–1 050 ml/ha</p>	<p>Dien toe as 'n volle dekbespuiting teen 2500–3500 L spuitmengsel per hektaar vanaf 30 % blomstadium. Herhaal bespuiting 14 dae later (75 % blomblaarval). <b>KLARTAN® 240 EW</b> sal nie by benadeel nie.</p> <p>Dien toe soos hierbo in nie minder nie as 'n kwart van die spuitvolume benodig vir hoëvolume toediening.</p> <p><b>Sien waarskuwing teen weerstand onder “waarskuwings” bo.</b></p> <p>Dien toe as 'n volle dekbespuiting teen 2500–3500 L spuitmengsel per hektaar vanaf 75 % blomblaarval. Herhaal toediening met tussenposes van 14 tot 18 dae tot middel Desember. Antestia, vrugteknaagbesie, rooispinmyt (<i>Tetranychus urticae</i>), Europese rooimyt (<i>Panonychus ulmi</i>) en plantluise sal ook beheer word en gebande vrugtekalander (<i>Phlyctinus callosus</i>) sal onderdruk word.</p> <p><b>LET WEL:</b> Minstens twee bespuitings met <b>KLARTAN® 240 EW</b> is nodig om rooispinmyt te beheer.</p> <p>Dien toe soos hierbo in nie minder nie as 'n kwart van die spuitvolume benodig vir hoëvolume toediening.</p>
<p><b>Kanola</b> Plantluis (<i>Brevicoryne brassicae</i>)</p>	<p>150 ml/ha</p>	<p><b>Grondtoediening</b> Dien toe in 250 L water per hektaar sodra plantluise opgemerk word. Moet nie toediening uitstel tot die infestasië hoog is nie. Indien Amerikaanse bolwurm teenwoordig is tydens toediening sal dit ook beheer word (sien afdeling onder weerstand).</p> <p><b>Lugtoediening</b> Dien toe in ten minste 30 L water per hektaar.</p>
<p><b>Makadamias</b> Stinkbesie (<i>Pentatomidae spp</i>) <b>SLEGS MPUMALANGA</b></p>	<p><b>Hoëvolume</b> 30 ml/100 L water</p>	<p>Dien toe as 'n volle dektoediening in 'n program van drie bespuitings met 28 dae tussenposes. Begin die eerste bespuiting sodra 'n gemiddeld van 1.8 stinkbesies per boom getel word. Dit kan bepaal word deur die booms kudmetode. Begin monitering twee weke na blom.</p>

GEWAS EN PLAAG	DOSIS	OPMERKINGS
<p><b>Perskes, pruime en pruimedante</b></p> <p>Groenperskeplantluis (<i>Myzus persicae</i>)</p>	<p><b>Hoëvolume:</b></p> <p>30 ml/100 L water</p>	<p>Dien toe teen 1500–2000 L spuitmengsel per hektaar as 'n volle dekbespuiting sodra plantluis opgemerk word. Herhaal toediening soos nodig. Bespuitings sal ook rooispinmyt, Amerikaanse bolwurm, Antestia en vrugteknaagbesie beheer indien teenwoordig is tydens bespuitings.</p> <p><b>LET WEL:</b> Minstens twee bespuitings met <b>KLARTAN® 240 EW</b> is nodig om rooispinmyt te beheer.</p>
<p><b>Sitrus</b></p> <p>Blaaspootjie (<i>Scirtothrips aurantii</i>)</p>	<p>15–30 ml/100 L water</p>	<p>Dien die hoër dosis toe by 70–90 % blomblaarval as 'n ligte dekbespuiting. Benat blare tot afloop. 'n Tweede bespuiting teen die laer dosis kan toegedien word 4 tot 5 weke na die eerste toediening.</p> <p>Amerikaanse bolwurm, sitruslandmeter, lomoenskoenlapper (<i>Papillio</i> spp.), silla (<i>Trioza erytrae</i>) en plantluis sal beheer word indien dit teenwoordig is tydens die tyd van toediening.</p> <p><b>WAARSKUWING: KLARTAN® 240 EW</b> moet nie in gebiede toegedien word waar weerstand van blaaspootjies teen sintetiese piretroïede voorkom nie. <b>Sien nota aan einde van tabel.</b></p>
<p><b>Tamaties</b></p> <p>Amerikaanse bolwurm (<i>Helicoverpa armigera</i>)</p>	<p>15 ml/100 L water</p>	<p>Dien toe as 'n volle dekbespuiting sodra blomstadium bereik is en herhaal met 7 dae tussenposes. Gebruik 500–1000 L spuitmengsel per hektaar afhangende van plantgrootte. Programbespuitings sal gewoonlik rooispinmyt beheer. Indien mytpopulasies die drempelwaarde oorskry, word toediening met 'n geregistreerde mytmiddel aanbeveel.</p> <p><b>Sien waarskuwing teen weerstand onder “waarskuwings” bo.</b></p>
<p><b>Koring</b></p> <p>Bruinaarkoringluis (<i>Sitobion avenae</i>)</p> <p><b>SLEGS WES-KAAP</b></p>	<p>100 ml/ha</p>	<p><b>Grondtoediening</b></p> <p>Dien toe sodra luis voorkom.</p> <p><b>Lugtoediening</b></p> <p>Dien toe in 30 L water per hektaar.</p>

**NOTA:**

**KLARTAN® 240 EW** moet nie in dieselfde blaaspootjies beheerprogram as **MEOTHRIN** (Reg. no. L2023) gebruik word nie.