

BEFORE USING THIS PRODUCT READ THE LABEL CAREFULLY!

Insecticide



RAMBA 100 EC

Reg. No. L 9899 Act/Wet No. 36 of/van 1947

2: 5/6/2019 – July 2019

An emulsifiable concentrate contact and stomach insecticide and acaricide for the control of pests mentioned on the crops listed.

'n Emulgeerbare konsentraat kontak- en maagaksie insekdoder vir die beheer van plae in gewasse soos aangedui.

ACTIVE INGREDIENT / AKTIEWE BESTANDDEEL

bifenthrin (pyrethroid) **100 g/l** bifentrien (piretroïed)

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



villa

Registration holder / Registrasiehouer:

Villa Crop Protection (Pty) Ltd.

Co. Reg. No. / Mpy. Reg. Nr. 1992/002474/07

PO Box / Posbus 10413, Aston Manor, 1630

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UN Number: 3351



Willow Set & Print 011 394-4486



**HARMFUL
SKADELIK**



GEBRUIKSAANWYSINGS INGESLUIT

VERWYS NA BESONDERHEDE
GEDRUK OP HOUER/SAK

Date formulated:
Formuleringsdatum:

DIRECTIONS FOR USE ENCLOSED

REFER TO DETAILS PRINTED
ON CONTAINER/BAG

Batch number:
Lotnommer:

RAMBA 100 EC

Reg. No. L 9899 Act/Wet No. 36 of/van 1947

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ACTIVE INGREDIENT / AKTIEWE BESTANDEEL:

bifenthrin (pyrethroid) / bifentrien (piretroïed)100 g/l

Registration holder / Registrasiehouer:

VILLA CROP PROTECTION (PTY) LTD.

Co. Reg. No. 19992/002474/07 Mpy. Reg. Nr.

P.O. Box / Posbus 10413

ASTON MANOR, 1630 Tel. (011) 396 2233

**HARMFUL****SKADELIK****WARNINGS**

Allow the following number of days between the last application and harvest or grazing of the crops listed below:

Cotton	28 days
Maize & sweetcorn (including green maize & grazing)	56 days
Potatoes	21 days
Tomatoes	5 days

IN THE CASE OF CROPS INTENDED FOR EXPORT, CONFIRM WITHHOLDING PERIODS WITH THE RELEVANT EXPORT ORGANISATION. IF THIS PRODUCT IS USED ACCORDING TO THE RECOMMENDATIONS ON THIS LABEL, LOCAL MRL VALUES WILL NOT BE EXCEEDED. HOWEVER, VILLA CROP PROTECTION (PTY) LTD. CANNOT ACCEPT RESPONSIBILITY FOR EXPORTED CROPS EXCEEDING THE IMPORT TOLERANCES OF OTHER COUNTRIES.

- Handle with care.
- Flammable.
- Harmful if swallowed, inhaled or by skin contact.
- Causes skin irritation and serious eye damage.
- Extremely toxic to bees, aquatic organisms and wildlife.
- Store in a cool, dry place away from food and feedstuffs.
- Keep out of reach of children, uninformed persons and animals.
- Re-entry: Do not enter treated area within 1 day after treatment unless wearing protective clothing.
- **In case of poisoning immediately call a doctor and make this label available to him/her.**

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. The action and effect thereof may be effected by factors such as abnormal soil, climatic and storage conditions, quality of dilution water, compatibility with other substances not indicated on the label, 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 handle until all safety precautions have been read and understood; suspected of causing cancer.
- Wear a face shield and rubber gloves when handling the product, preparing and applying the spray mixture.
- Avoid eye splashes, skin contact and inhalation of spray mist.
- Wash with soap and water after use or after accidental skin contact.
- Wash contaminated clothing after use.
- Do not eat, drink or smoke whilst mixing or applying the product or before washing hands and face and change of clothing.

- Do not breathe mist, vapours and spray; causes damage to the nervous system through prolonged or repeated exposure.
- Prevent drift onto other crops, grazing, rivers, dams or areas not under treatment.
- Thoroughly clean spraying equipment directly after use and dispose of wash water where it will not contaminate food, grazing, boreholes, rivers or dams.
- **TRIPLE RINSE** empty containers in the following manner: Invert the empty container over the spray or mixing tank and allow draining 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 a third of the volume of the container. Add the rinsing to the contents of the spray tank before destroying the container in the prescribed manner.
- Destroy the container by perforation and flattening and dispose of it in a safe way.
- **Do not** re-use the empty container for any other purpose.
- Prevent contamination of food, feeds, drinking water and eating utensils.

SYMPTOMS OF HUMAN POISONING

No cases of poisoning have been described in the general population and none from occupational exposure. However, symptoms that may arise if the product is mishandled and overexposure occurs are nausea, vomiting, diarrhoea, abdominal pain, ataxia, unsteady gait, hyperexcitability, salivation, tremors and incontinence. Larger doses may cause convulsions and loss of consciousness.

FIRST AID TREATMENT

- **Skin:** Remove contaminated clothing, shoes and leather goods. Wash skin gently and thoroughly with cold water and non-abrasive soap. Do not rub the skin. Apply olive oil to affected areas for prompt relief. Get medical attention if irritation occurs and persists.
- **Eyes:** Rinse eyes with clean water for at least 20 minutes. If irritation occurs and persists, obtain medical attention.
- **Inhalation:** If vapours or mists have been inhaled and irritation has developed, remove the source of contamination or move victim to fresh air. If breathing difficulty or irritation occurs and persists, obtain medical attention.
- **Ingestion:** Have victim rinse mouth thoroughly with water. **Do not induce vomiting, due to aromatic solvent. Obtain medical advice immediately.** Never give anything by mouth to an unconscious person. Treat respiratory difficulty with artificial respiration and oxygen. Qualified medical personnel must perform administration of oxygen.

NOTE TO PHYSICIAN

There is no specific antidote available. This product contains materials that may cause severe pneumonitis if aspirated. In cases of ingestion, consider gastric lavage, however, prevent aspiration. Observe patient for respiratory difficulty from aspiration pneumonitis. Treat symptomatically and supportively.

RESISTANCE WARNING

RAMBA 100 EC is a group code 3A insecticide. Any insect population may contain individuals naturally resistant to **RAMBA 100 EC** 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 **RAMBA 100 EC** 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 other control methods (chemical, cultural, biological) into insect control programmes.

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

RESISTANCE MANAGEMENT

- Resistance of the African bollworm (*Helicoverpa armigera*) to synthetic pyrethroids has been confirmed. As part of a strategy to prevent development of widespread resistance, the following guidelines must be adhered to for the control of *Helicoverpa armigera*:
Cotton: Synthetic pyrethroids must only be applied to cotton during the period 1st January to 1 March.
All Other Crops: Do not apply more than two (2) applications per growing season.
- **For optimal control of susceptible bollworm populations, the larvae should not exceed 10 mm (1 cm) in length, at time of application.**

- If a pyrethroid spray gave ineffective control, do not re-spray with any synthetic pyrethroid, even at a corrective dosage rate. Use a product from a different chemical group.

DIRECTIONS FOR USE: Use only as directed.

Compatibility:

- **RAMBA 100 EC** is compatible with **Biomectin 18 EC, Commodobuff, Addition 150 SC** and **Charge**.
- Do not mix with seaweed extracts, **Amitraz, Chinomethionat** and **Prothiophos**.
- The compatibility of **RAMBA 100 EC** with other products may be influenced by several factors. As changing factors may vary, a physical compatibility test must always be performed before such tank mixtures are sprayed.
- When **RAMBA 100 EC** is used in conjunction with any other agricultural remedy, adhere to all **WARNINGS, PRECAUTIONS** and **DIRECTIONS FOR USE** mentioned on that label.

Mixing instructions:

- Half fill the spray tank with clean water.
- Effectiveness of **RAMBA 100 EC** can be affected by very hard water (>1000 ppm. solutes) and/or water with a high or low pH value. The ideal pH is between 5 and 8.
- Use **Commodobuff** buffer at the registered rate to adjust the pH of the water if not in the ideal range.
- **Commodobuff** buffer must be mixed with the water prior to the addition of **RAMBA 100 EC**.
- Take approximately 10 litres of this pH-corrected water from the mixing tank and thoroughly mix with the required volume **RAMBA 100 EC**.
- If any other product is to be mixed with **RAMBA 100 EC**, the required volume of this product must be pre-mixed in a similar way.
- Agitate the water in the spray tank and then add the product(s) to the tank in the following sequence (as applicable): **Commodobuff**, suspension concentrate, water-soluble concentrate, emulsifiable concentrate.
- Fill the spray tank with water to the required level while maintaining agitation, to ensure thorough mixing.
- Maintain agitation during application.
- Prepared spray mixtures must not be left in the spray tank for any length of time, e.g. overnight.

Application instructions:

- All applications must be performed with suitable equipment that is in good working order and correctly calibrated, to give the desired coverage for that particular method of application.
- Ensure that thorough penetration and wetting is obtained.
- Monitor efficacy within (three) 3 days after application. A further application may be necessary if unacceptable levels of control have been obtained.

Time of Application (Cotton – African bollworm complex):

- **RAMBA 100 EC** must only be used in accordance with the principles of good pest management and integrated pest control namely during the period from peak flowering until boll split.
- This is for the period approximately 10 to 22 weeks after plant emergence.
- For the period before peak flowering, based on scouting results, use a registered product from another chemical class.

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- For the period before peak flowering, based on scouting results, use a registered product from another chemical class.

Time of Application (Cotton – Two spotted spider mites):

- **RAMBA 100 EC** is a contact acaricide and therefore thorough overall application is required.
- Special care should be taken to ensure that good under leaf coverage is achieved.
- Apply when the mite threshold of a population index of one (1) is exceeded or reached. (Refer – “**Scouting method Mites**”).
- Adequate under leaf coverage is required and therefore only suitably adjusted ground spray equipment should be used for red spider mite control on cotton.

Ground application:

- Use hollow cone nozzles that produce a medium to fine droplet spectrum with conventional high volume spray equipment.
- Calibrate the spraying equipment before application and ensure correct application.
- Ensure an even distribution of the spray mixture over the whole target area.

Centre pivot application (Maize only):

RAMBA 100 EC may be applied through a centre pivot irrigation system.

NOTES

Centre pivot application may not be as effective as ground application with a boom sprayer equipped with hollow cone nozzles. This is due to excessive run-off of the applied product(s), and a lack of under leaf coverage when applied by means of centre pivot application).

It is important that the following requirements be met:

- The system must have a functional check valve, vacuum relief valve and low-pressure drain appropriately located on the irrigation pipeline to prevent contamination of the water source from back flow.
- The pesticide injection pipeline must have a functional automatic quick-closing check valve to prevent the flow of liquid back towards the injection pump.
- The pesticide injection line should also have a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn out of the supply tank when the irrigation system is either automatically or manually closed down.
- The system must have functioning interlocking controls to shut off the pesticide injector pump automatically when the water-pump motor stops.
- The irrigation line or water-pump must include a functional pressure switch, which will stop the water-pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do not apply when wind conditions favour drift beyond the area intended for treatment.
- **IMPORTANT**
Use very clean water for pivot irrigation application. Water must be free of silt, clay and organic material, as pyrethroids tend to adhere to these particles and adversely affect the efficacy.

APPLICATION RATES

Crop / Pest	Dosage Rate	Remarks
Cotton *Bollworm Complex	400 ml / ha	Ground application: Boom and nozzle. Apply in 200 litres water per hectare (See also note 1 below).
Two spotted spider mites	4 ml / 100 m row	Tramline treatment: Apply in a sufficient volume of water, to ensure thorough coverage of plants. Nozzles should be suitably arrayed to cover whole plant with at least one nozzle spraying directly over each row. Application should, based on scouting, be repeated later if necessary. Refer “ RESISTANCE WARNING ” above.
NOTES		
<ul style="list-style-type: none"> For cotton smaller than 60 cm in height, apply only 50 % of the recommended rate in 100 litres water. * Bollworm complex included – African bollworm, Red bollworm and Spiny bollworm. All will be controlled by the above recommended rates. However, larvae established inside bolls may not be controlled. 		
Bollworm Complex	* 400 ml / ha	Ground application: Application must be based on scouting and repeated if necessary. (See notes under scouting). Ensure thorough coverage of the plants. Apply in 200 litres water per hectare. (SEE RESISTANCE WARNING ABOVE) Aerial application: Apply in at least 30 litres water per hectare. Corrective treatments: (See “ NOTES ” below)
NOTES		
<ul style="list-style-type: none"> For cotton smaller than 60 cm in height, apply only 50 % of the recommended rate in 100 litres water. * Bollworm complex included – African bollworm, Red bollworm and Spiny bollworm. All will be controlled by the above recommended rates. However, larvae established inside bolls may not be controlled. Corrective treatment: In the event of an emergency situation arising as a result of factors preventing pest control, for example adverse weather conditions, use a product from a different chemical group. This should only be regarded as an emergency treatment when a bollworm population in different instars has become established. Optimum pest management is achieved using RAMBA 100 EC as a preventative spray starting at peak flowering on regular weekly scouting. Application effectiveness, density of crop, foliage and larval instar affect treatment success. 		
Scouting Method: Bollworm complex.		
Apply treatments, based on scouting as follows:		
a) Scout 24 randomly chosen plants in field up to 15 hectares.		
b) Scout the fields weekly from flowering stage until boll-split.		
c) Apply treatments when the following threshold is exceeded:		
<u>African bollworm:</u> average 1 egg per 2 plants or 5 small larvae per 24 plants;		
<u>Red bollworm:</u> 6 eggs per 24 plants;		
<u>Spiny bollworm:</u> 4 larvae per 24 plants,		
d) Up to week 7, apply follow-up sprays at 7-day intervals, if threshold values require spraying.		
From week 17, if plant growth tempo has slowed down, intervals can be extended to 14 days, taking into account the threshold values. For African bollworm and Red bollworm, sprays must be applied when the cumulative count over a maximum period of four (4) consecutive unsprayed weeks reached or surpasses the above threshold levels.		

Crop / Pest	Dosage Rate	Remarks
<p>Cotton (Continue)</p> <p>Two spotted spider mites</p>		
<p>Scouting Method: Two spotted spider mites. Weekly inspection of 48 plants per hectare is recommended.</p> <p>a) For each plant choose three (3) leaves, one (1) in the middle and two (2) at the top of the plant. b) Count the number of adult females (visible red stages) on the three (3) leaves and record as follows: 0 mites = A; 1–10 = B; 11–30 = C; and more than 30 mites = D Convert the letters A = 0; B = 1; C = 2; D = 3 and total</p> <p>Population index = $\frac{\text{Total}}{\text{Number of plants inspected}}$</p> <p>Spraying should commence at a population index of 1,0 and be repeated whenever a substantial increase is recorded. The aim is to keep the infestation score below an average index rating of 2 per plant until 20 weeks after crop emergence or first boll split.</p>		
<p>Potatoes Tuber moth (<i>Phthorimaea operculella</i>)</p>	300 ml / ha	Apply as a preventative full cover spray in not less than 500 litres water per hectare. (Refer to “ RESISTANCE WARNING ” above).
<p>Tomatoes Spider mites (<i>Tetranychus</i> spp.)</p>	400 ml / ha	Apply as a full cover spray in at least 500 litres water per hectare. Ensure thorough wetting of the plants and especially the undersides of leaf surfaces. In trellised tomatoes, spray on both sides of the row. Under severe infestation levels repeat application within 7 days. (Refer to “ RESISTANCE WARNING ” above).
<p>Tomato Semi-looper (<i>Chrysodeixis acuta</i>)</p> <p>Leafminer (Potato tuber moth larvae) (<i>Phthorimaea operculella</i>)</p> <p>American leafminer (<i>Liriomyza trifolii</i>)</p>	300 ml / ha	Apply as a full cover spray in at least 500 litres water per hectare. Ensure thorough wetting of the plants. Repeat application within 7 to 10 days if necessary. (Refer to “ RESISTANCE WARNING ” above).

Crop / Pest	Dosage Rate	Remarks
Maize Two-spotted spider mite (<i>Tetranychus urticae</i>)	500 ml / ha	Because of the growth habit of the maize plant is very difficult to obtain an even wetting of the plant. Therefore, the control of adult Two-spotted spider mites is aimed at covering the entire plant until after the soft dough stage of the cob. Application of RAMBA 100 EC can be done by means of ground or centre pivot application*. Refer to “ Centre pivot application ” above. Ensure thorough wetting of the entire plant, especially the undersides of the leaves. The addition of a suitable wetter such as Charge is important. Repeat application within 14 days if necessary. If African bollworm is present at the time of application, it will also be controlled. (Refer to “ RESISTANCE WARNING ” above).
Maize & sweetcorn Maize stalk borer (<i>Busseola fusca</i>) Sorghum stem borer (<i>Chilo partellus</i>)	3 ml / 100 m row PLUS 3 ml / 100 m row Addition 150 SC PLUS 25 ml/100 ℓ Charge	Apply as a full cover spray when eggs are found on 5 % of the plants or if 10 % of the plants show hail damage. Apply a minimum of 3 litres spray mixture per 100 m plant row. Applications must be performed early in the morning and direct spray into funnels – ensure thorough coverage of the plant. Apply a second application 7 to 10 days later depending on the level of infestation. Do not exceed two (2) applications per season.
Green maize African bollworm (<i>Helicoverpa armigera</i>)	300 ml / 100 ℓ water	Apply as above. Do not exceed two (2) applications per season.

The following products mentioned in this label may be replaced with equivalent products:

- **COMMODOBUFF** (L 5390 / N-AR 1107) = **PAZBUFF** (L 5385) = **AQUABUFF** (L 5451 / W 130060) = **REVERBUFF** (L 3008),
- **CHARGE** (L 9100) = **TECHNIWET SUPER** (L 9239),
- **BIOMECTIN 18 EC** (L 7979 / N-AR 1112) = **UNIMECTIN 18EC** (L 7978) (Abamectin) and
- **ADDITION 150 SC** (L 9146 / N-AR 1508) = **ADVANCE 150 SC** (L 9147 / W 130689) (Indoxacarb)

COMMODOBUFF, AQUABUFF, REVERBUFF, ADDITION 150 SC, TECHNIWET SUPER, BIOMECTIN 18 EC and/en **CHARGE** are registered products of / is geregistreerde produkte van **VILLA CROP PROTECTION (PTY) LTD.**

PAZBUFF and/en **ADVANCE 150 SC** are registered products of / is geregistreerde produkte van **UNIVERSAL CROP PROTECTION (PTY) LTD.**