

BEFORE USING THIS PRODUCT READ THE LABEL CAREFULLY!

Insecticide



**CARBARYL 850 WP**

Reg. No. L 7626 Act/Wet No. 36 of/van 1947

2: 28/1/2014 – Jan2017

*A wettable powder contact and stomach insecticide for garden, household, public health and agricultural uses as listed.*

*'n Benatbare poeier kontak- en maag insekdoder vir tuin, huishoudelike, publieke gesondheid en landboukundige gebruike soos aangedui.*

**ACTIVE INGREDIENT / AKTIEWE BESTANDEEL**

carbaryl (carbamate) **850 g/kg** karbariel (karbamaat)

IRAC INSECTICIDE GROUP CODE **1A** IRAC INSEKDODER GROEPKODE

kg

**villa**

Registration holder / Registrasiehouer:

Universal Crop Protection (Pty) Ltd.

Co. Reg. No. / Mpy. Reg. Nr. 1983/008184/07

PO Box / Posbus 801, Kempton Park, 1620

Tel: 011 396 2233

Website / Webblad: [www.villacrop.co.za](http://www.villacrop.co.za)

UN Number: 2757



Willow Set & Print 011 394-4486



**HARMFUL  
SKADELIK**



GEBRUIKSAANWYSYNGS 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:

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**UNIVERSALCROP PROTECTION (PTY) LTD.**

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Tel. (011) 396 2233

**HARMFUL**  **SKADELIK**

**WARNINGS****Withholding periods:**

<b>Minimum time between the last application and harvest or feeding:</b>	
Lucerne	1 day before baling, 14 days before grazing
Prickly pears	1 day
Cotton and Maize	7 days
Tobacco	14 days
Table grapes	4 to 6 weeks
Other crops as mentioned	14 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, UNIVERSAL CROP PROTECTION (PTY) LTD. CANNOT ACCEPT RESPONSIBILITY FOR EXPORTED CROPS EXCEEDING THE IMPORT TOLERANCES OF OTHER COUNTRIES.**

- Handle with care.
- Poisonous by contact, swallowing and inhalation.
- Toxic to fish, bees and wildlife.
- Store away from food and feeds.
- Keep out of reach of children, uninformed persons and animals.
- Keep container well closed.
- Can cause staining of lime washed surfaces.
- Re-entry: Do not enter treated area within 1 day after treatment unless wearing protective clothing.
- **In case of poisoning call a doctor and make this label available to him/her.**

**Aerial application**

Notify all inhabitants of the immediate area to be sprayed and issue the necessary warnings. Do not spray over or allow drift to contaminate water or adjacent areas.

**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, 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 further 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 event of any uncertainty.**

**PRECAUTIONS**

- Do not inhale the powder or spray mist.
- Avoid ingestion and contact with the skin, clothes and eyes.
- Wear protective clothing - a face shield, rubber gloves, rubber boots and a long sleeve shirt and trousers must be worn when handling, preparing and applying the product.

- Wash contaminated clothes after use.
- Wash thoroughly with soap and water after application and accidental skin contact.
- Do not eat, drink or smoke whilst mixing or applying the product or before washing hands and face and change of clothing.
- Prevent drift onto other crops, grazing, rivers, dams and areas not under treatment.
- Do not apply near fishponds, fish bowls and aquaria.
- Clean applicator after use and dispose of wash water where it will not contaminate food, grazing, rivers or dams.
- Containers and packages must be completely emptied before being disposed of. Shake out thoroughly into the applicator and destroy the empty container thereafter in the described manner.
- Destroy the empty container by perforation and flattening and dispose of it in a safe manner.
- **Never** re-use the empty container for any other purpose.
- Prevent contamination of food, feeds, drinking water and eating utensils.

### **SYMPTOMS OF HUMAN POISONING**

**Carbaryl** is a carbamate compound, which inhibits cholinesterase. Systemic effects may begin within a few minutes or several hours of exposure. Initial symptoms can be nasal hyperaemia, watery discharge, chest discomfort and wheezing. Other symptoms may include nausea, vomiting, diarrhoea, abdominal cramps, headache, vertigo, tightness of the chest, anxiety, ocular pain, ciliary muscle spasm, blurred vision, small pupils, or mydriasis, lacrimation, salivation, sweating, and confusion.

In severe cases, there may be involuntary defecation, bradycardia, hypotension, pulmonary oedema, convulsions, coma and death from respiratory failure or cardiac arrest.

### **FIRST AID TREATMENT**

- Remove the patient immediately from the source of poisoning to a cool, well-ventilated area and keep him/her calm and reassured. If breathing has stopped, give mechanical artificial respiration (not direct mouth-to-mouth). Qualified personnel should perform administration of oxygen. Get medical attention immediately.
- Inhaled: Maintain airway and administer oxygen if available. Keep affected person warm and at rest.
- Skin contact: Remove contaminated clothing immediately and rinse contaminated body area thoroughly with plenty of soap and cold water, followed by alcohol. Do not rub the skin. Emergency personnel should wear gloves and avoid contamination.
- Eye contact: Flush contamination out of eyes with clean, lukewarm, gently flowing water for at least 20 minutes, while holding eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face.
- Swallowed: If swallowed, rinse mouth thoroughly with water and immediately get medical attention. If the person is alert and respiration is not depressed, give syrup of Ipecac followed by water or activated charcoal if instructed. If vomiting occurs, keep head below hips to prevent aspiration. Establish and maintain airway.
- **Never** give anything by mouth to an unconscious person.
- **Take the person to a physician immediately.**

### **NOTE TO PHYSICIAN**

If consciousness level declines or vomiting has not occurred in 15 minutes, empty stomach by gastric lavage. Avoid aminoglycosides and succinylcholine. Phenothiazines, reserpine, theophylline, morphine, Pralidoxime (2-PAM, Protopam) and other oximes are contra-indicated.

Antidote: Administer atropine sulphate intravenously or intramuscularly. In moderately severe poisoning administer atropine sulphate, 0.4 to 2.0 mg repeated every 15 minutes, until atropinization is achieved (dry, flushed skin, dry mouth and tachycardia). Maintain atropinization by repeated doses for 2 to 12 hours, or longer, depending on the severity of poisoning.

### **RESISTANCE WARNING**

**CARBARYL 850 WP** is a group code 1A insecticide. Any insect population may contain individuals naturally resistant to **CARBARYL 850 WP** and other group code 1A insecticides. The resistant individuals can eventually dominate the insect population if these insecticides are used repeatedly. These resistant insects may not be controlled by **CARBARYL 850 WP** or any other group code 1A 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.

## **USE RESTRICTIONS**

### **Apples:**

- To avoid possible fruit thinning on apples, do not apply within 21 days after full bloom.
- **Do not** use as a thinning agent on other apple varieties than Starking, Granny Smith and Starkrimson.

### **Pears and Quinces:**

- **Do not** apply to Keiffer and Forelle pear varieties and quinces.

### **Grapes:**

- Cease application on dark skin grapes as soon as berries have started to colour.

## **DIRECTIONS FOR USE: Use only as directed.**

- **CARBARYL 850 WP** must only be applied with a calibrated sprayer that is in good working order.
- Use the spray mixture without delay and do not allow standing for prolonged periods, e.g. overnight.

### **Compatibility:**

- The compatibility of **CARBARYL 850 WP** with other products may be influenced. As variable factors may vary, a physical compatibility test must always be performed before such tank mixture is sprayed.

### **pH of the spray water:**

- The efficacy of **CARBARYL 850 WP** may be reduced by very hard water (> 1 000 ppm solutes) and by water with a high pH value.
- When **CARBARYL 850 WP** is used, the optimal efficacy thereof will be obtained in water with a pH between 4 to 5. Water of a higher or lower pH than 4 to 5 should be buffered to pH 4 to 5, by using a suitable buffer.
- Where a buffer is used to adjust the pH of the water, the buffer must be mixed with the total volume of water required for that particular tank mixture, before adding the **CARBARYL 850 WP**.

### **Aerial application:**

Aerial application of **CARBARYL 850 WP** 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 litres per hectare 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 aerially at a lower volume rate than recommended above.
- Droplet coverage: 30 to 40 droplets per cm<sup>2</sup> must be recovered at the target area.
- Droplet size: A droplet spectrum with a VMD of 250 to 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 to 4 metres 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 to 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 per hour.
- 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 RATES

<b>Crop / Pest</b>	<b>Dosage rate</b>	<b>Remarks</b>
<b>All crops / General garden pests</b> Army worm	310 g / ha	Spray when necessary. Use 30 litres water for aerial application.
Chafer Beetles	125 g / 100 ℓ water  <b>OR</b> 12.5 g / 10 ℓ water (2 level scoops)	Apply regularly onto young growth as soon as the pest appears.
Elegant Grasshopper	125 g / 100 ℓ water  <b>OR</b> 12.5 g / 10 ℓ water (2 level scoops)	Apply when immature stages are noticed.
<b>Apples and Pears</b> Codling moth	60 g / 100 ℓ water  <b>OR</b> 6 g / 10 ℓ water (1 level scoop)	Commence spraying at 75 % petal drop and follow up with 5 to 6 additional sprays at 14 to 21 day intervals.
Leaf-roller	125 g / 100 ℓ water  <b>OR</b> 12.5 g / 10 ℓ water (2 level scoops)	Using the dosage rate of 60 g per 100 litres water <b>OR</b> 6 g per 10 litres water in a complete Codling moth spray programme, will give effective control of Leaf-roller. If a single spray is required, apply as indicated.
Pear Bud Mite	60 g / 100 ℓ water  <b>OR</b> 6 g / 10 ℓ water (1 level scoop)	If used in a complete Codling moth spray programme, Pear bud mite will be controlled, providing that at least one application is performed before the end of the third week in November.
<b>Apples</b> Chemical fruit thinning of some apple varieties	Apply 14 to 17 days after full bloom. <b>Do not mix with other chemicals.</b>	
	30 g / 100 ℓ water	<u>Starking:</u> In case of heavy fruit set, the concentration can be increased to 60 g per 100 litres water.
	15 g / 100 ℓ water	<u>Granny Smith:</u> In case of heavy fruit set, the concentration can be increased to 30 g per 100 litres water. Spray only on trees older than 5 years.
	90 g / 100 ℓ water	<u>Starkrimson:</u>
<b>Apricots, Apples and Pears</b> Mealybug	125g / 100 ℓ water  <b>OR</b> 12.5 g / 10 ℓ water (2 level scoops)	Commence treatment early in December. Follow up with 1 to 2 additional treatments, depending on the degree of infestation. <b>Do not</b> spray after middle January, as later applications will not control the pest satisfactorily.

<b>Crop / Pest</b>	<b>Dosage rate</b>	<b>Remarks</b>
<b>Maize</b> Chafer beetle Armyworm	125 g / 100 ℓ water	Apply as a full cover spray to wet plants thoroughly. Apply 250 litres of spray mixture per hectare. Spray when the infestation is noticed. Apply 250 litres of spray mixture per hectare.
<b>Cotton</b> Red bollworm, Spiny bollworm, Stainers, Syagrus beetle & Leafhoppers	600 g / 100 ℓ water 0.75 to 1.5 kg / ha (Maximum 1.5 kg / ha)	Commence application when the first squares develop and damage is noticed. Apply as a full cover spray. Repeat at 5 to 7 day intervals. Use up to 250 litres of spray mixture per hectare. <b>Aerial application:</b> Use the lower dosage rate for cotton up to 60 cm high and the higher dosage for higher cotton. Refer to “ <b>Aerial application</b> ” instructions above.
<b>Castor Oil</b> Castor oil looper ( <i>Achaea</i> spp.)	125 g / 100 ℓ water	Start spraying as soon as Loopers are noticed.
<b>Tobacco</b> African bollworm & Tobacco slug	125 g / 100 ℓ water	Apply a full cover spray as soon as the pest appears. Repeat application when necessary.
<b>Lucerne</b> Lucerne caterpillar	625 to 850 g / ha	Spray when infestation is noticed. Dosage depends on stage of growth of lucerne.
<b>Grape vines</b> Mealybug	125 g / 100 ℓ water  <b>OR</b> 12.5 g / 10 ℓ water (2 level scoops)	Commence spraying as soon as Mealybugs are noticed at the base of young shoots. Repeat applications every 3 weeks if necessary. <b>CARBARYL 850 WP</b> treatments against Mealybugs, will assist in the control of Vine snout beetles.
<b>Cactus- and Spineless pears</b> Cactoblastis & Cochineal	175 g / 100 ℓ water  <b>OR</b> 17.5 g / 10 ℓ water (3 level scoops)	Spray for Cactoblastis during the first two weeks of November and March respectively. Applications for Cochineal may be performed any time of the year. High pressure and thorough wetting is essential. Add a wetting agent such as <b>Villa 51</b> .
<b>Flowers, Ornamentals and Lawns</b> African bollworm	125 g / 100 ℓ water  <b>OR</b> 12.5 g / 10 ℓ water (2 level scoops)	Apply as a full cover spray, as soon as the pest is noticed (usually during the blossom period).
Lawn caterpillar	450 g / 100 ℓ water  <b>OR</b> 45 g / 10 ℓ water (7 ½ level scoops)	Apply as soon as damage is noticed. Use sufficient spray mixture, to ensure good coverage.

<b>Crop / Pest</b>	<b>Dosage rate</b>	<b>Remarks</b>
<b>Public health</b> Bedbugs in houses, barns, compounds & stores	60 g / 10 ℓ water  <b>OR</b> 60 g / 10 ℓ water (10 level scoops)	Apply as a coarse droplet spray. Pay particular attention to the thorough treatment of bed frames, skirting boards, the inside of cupboards and drawers, cracks and crevices, behind unpainted wood surfaces and similar localities frequented by these insects. Do not close the room when spraying. Residual action is possible up to 60 days.
Fleas	15 g / 10 ℓ water  <b>OR</b> 15 g / 10 ℓ water (2 ½ level scoops)	
<b>Hides and Skins</b> Dermestidae hide and Skin larvae	25 g / 10 ℓ water  <b>OR</b> 25 g / 10 ℓ water (4 level scoops)	Apply generously as a coarse spray, or by means of a paintbrush, to hides and skins as well as to sheltering places, such as cracks and crevices in floors and walls. Ten litres of spray mixture will be sufficient to treat approximately 100 skins or 30 hides.
Wool-on-skin moth larvae	25 g / 10 ℓ water  <b>OR</b> 25 g / 10 ℓ water (4 level scoops)	Apply as a coarse spray at the rate of 18 litres of spray mixture to 200 skins.

**VILLA 51** is a registered product of / is 'n geregistreerde produk van  
**VILLA CROP PROTECTION (PTY) LTD.**