



ADAMA

Listen - Learn - Deliver

**RESTRICTED USE AGRICULTURAL REMEDY: THIS REMEDY IS RESTRICTED DUE TO ACUTE TOXICITY. THIS REMEDY MAY ONLY BE SOLD TO AND USED BY A REGISTERED PEST CONTROL OPERATOR, OR BY SOMEONE UNDER THE SUPERVISION OF A REGISTERED PEST CONTROL OPERATOR, AND ONLY FOR THOSE USES COVERED BY THE PEST CONTROL OPERATOR'S SCOPE OF REGISTRATION, AND ONLY AS DIRECTED ON THIS LABEL.**



# CARBODAN 10 GR

Reg. no. L7577 Act/Wet 36 of/van 1947  
N-AR 0911

**READ THE LABEL BEFORE USE  
KEEP OUT OF REACH OF CHILDREN AND ANIMALS**

<b>GROUP</b>	<b>1A</b>	<b>INSECTICIDE</b>
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A systemic granule insecticide and nematicide for the control of pests in crops as indicated.	'n Sistemiese korrel insek- en aalwurmdoder vir die beheer van plaë in gewasse soos aangedui.
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   <b>DANGER</b>	<p><b>Hazard statements</b> Toxic if swallowed. Fatal if inhaled. Very toxic to aquatic life with long lasting effects.</p> <p><b>Precautionary statements</b> Use only outdoors or in a well-ventilated area. Wash hands and face thoroughly after handling.</p>
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### ACTIVE INGREDIENT/AKTIEWE BESTANDDEEL

Carbofuran (carbamate) ..... 100 g/kg ..... Karbofuran (karbamaat)

### NET MASS/NETTO MASSA

..... kg

#### REGISTRATION HOLDER/REGISTRASIEHOUER

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

#### IN CASE OF POISONING, CALL THE FOLLOWING NUMBERS:

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

#### EMERGENCY NUMBER:

SPILL TECH: +27 86 100 6366 or +27 83 253 6618

Un no.: 2757

Batch number .....  
Date of manufacture .....  
Expiry date .....

Lotnommer .....  
Datum van vervaardiging .....  
Vervaldatum .....



GHS information

## WARNINGS

- Toxic if swallowed.
- Fatal if inhaled.
- Very toxic to aquatic life with long lasting effects.

### Cabbage

- Apply only at planting time and do not harvest cabbages within 11 weeks after application.
- Do not use on quick maturing cultivars.
- Control of diamondback moth may start declining within 7– 8 weeks after application.

### Grain sorghum

- Apply only at planting time.
- Do not allow animals to feed on treated sorghum plants within 10 weeks of application.
- Control of stalk borer may start declining 7 – 8 weeks after application.

### Maize

- Apply only at planting time.
- Do not allow animals to feed on treated maize or make silage within 8 weeks after application under normal rainfall conditions. Should drought conditions prevail after application contact your nearest ADAMA South Africa (Pty.) Ltd. representative before using the plants as a fodder.
- Control of stalk borer may start declining 7 – 8 weeks after application.
- Leafhopper (vector of streak disease in maize) control may not be adequate and streak disease may occur especially on susceptible cultivars, particularly sweetcorn varieties and parent breeding lines in seed maize. This is particularly so when streak disease pressure is high as a result of close proximity of host plants (wheat, sugarcane) and mid-summer planting when natural populations of leafhoppers are high and **CARBODAN 10 GR** is used in soils of high pH.
- Application for black maize beetle is extremely critical. Ensure applicator is correctly calibrated and flow of granules checked regularly during application. Under conditions of high beetle population pressure up to 20% and more damage of plants may still occur after treatment.

### Potatoes

- Apply only at planting time and do not harvest within 90 days after application.

### Sugarcane

- Apply only at planting time or apply on ratoon cane within 120 days after cutting previous crop.
- At planting make sure that sets are placed at least 7.5 cm beneath the soil surface.

- Apply only once per crop cycle and allow at least 180 days between application and harvest.

### Tobacco

- Apply only at planting and not later than one week after planting in light sandy soil.
- Do not apply on transplants which were grown in seed trays.
- Do not harvest within 80 days after application.

### General warnings

- Handle with extreme care.
- Highly toxic to many fish, birds and wildlife. To prevent poisoning of birds, ensure that all granules are immediately covered by soil. Take special precautions at the end of planting rows where spillage may occur.
- Inform labour force of the potential danger of the product and give full instruction what to do in the case of poisoning. Mark treated areas with appropriate signs.
- Ensure that no edible crop is planted within 100 days within 10 m from the treated area.
- The efficacy of **CARBODAN 10 GR** can be adversely affected when used in alkaline or brackish soils with a pH > 7.
- Do not use **CARBODAN 10 GR** as a seed treatment.
- **Re-entry interval:** Wear rubber gloves and boots when working with treated soil or irrigating, for at least 30 days after application.
- In case of poisoning 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 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 to 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, and 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

- Use only outdoors or in a well-ventilated area.
- In case of inadequate ventilation wear respiratory protection.
- Do not breathe dust/fumes/mist vapours/spray.
- Do not eat, drink or smoke when using this product.
- Wash hands and face thoroughly after handling.

- Avoid release to the environment.
- Get emergency medical help immediately.
- Specific treatment is urgent - see information on the label under FIRST AID.
- IF SWALLOWED: Get emergency help immediately.
- Rinse mouth.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
- Collect spillage.
- Keep container tightly closed.
- Store in a locked, well-ventilated place.
- Dispose of contents/container to licensed waste facility in accordance with local authorities.

- Avoid skin contact.
- Wear suitable protective clothing, rubber boots and gloves, a suitable respirator and face shield when handling the product. Wash contaminated clothing daily.
- Prevent contamination of food, feed, drinking water and eating utensils.
- Prevent contamination of areas that are not under treatment, crops, grazing, rivers, dams or any other water source.
- Clean applicator thoroughly after use and dispose of wash water where it will not contaminate crops, grazing, rivers or dams.
- CLEAN THE EMPTY PAPER BAG AS FOLLOWS: Shake all the pesticide formulation out of the bag into the spray or mixing tank. Turn the bag inside out. Hold the bag over the spray or mixing tank and rinse the bag with running water for thirty seconds. Shake the rinsate off into the tank. Repeat the rinsing twice. Cut the bag into pieces and dispose via normal refuse disposal.
- Do not bury, burn or donate the bag to any other parties that may use it as a container for foodstuffs.
- Keep unprotected persons away from operating area.

## RELEVANT SUBSTANCES

Chemical name	Weight %	CAS no.
Carbofuran	10.2%	1563-66-2

## FIRST AID

Acute exposure to **CARBODAN 10 GR** may require decontamination and life support for the victims. Provide this label and the SDS to medical personnel for treatment. Emergency personnel should wear protective clothing appropriate to the type and degree of contamination.

Immediately remove contaminated clothing and remove the affected person from the contamination area. Keep the person warm, calm and covered up. First Aid personnel should pay

attention to their own safety. Take the container label or product name with you when seeking medical attention.

**Eye contact:** Immediately rinse/flush the eyes gently with water from the eye wash fountain for several minutes (at least 15 minutes), while holding the eyelids apart. Check for and remove contact lenses if easy to do so. Continue rinsing. Obtain medical attention if irritation occurs and persists.

**Skin contact:** Remove all contaminated clothing and shoes. Rinse the skin immediately with plenty of water for 15 to 20 minutes under the safety shower. Contact a poison control centre or medical practitioner if irritation occurs or persists. Wash contaminated clothing before re-use.

**Inhalation:** Immediately remove the affected victim from exposure to an area with fresh air. If breathing is difficult have qualified personnel administer oxygen. If breathing has stopped, administer artificial respiration. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Obtain immediate medical attention.

**Ingestion:** Obtain immediate medical attention - call a poison control centre or medical practitioner immediately for treatment advice. If conscious, rinse mouth thoroughly with water. Never give anything by mouth to an unconscious or convulsing person. Do not induce vomiting unless directed to do so by a medical professional. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomits, rinse mouth and administer more water.

## TOXICOLOGICAL INFORMATION

### Antidotes

Antidote for carbamate poisoning: repeated doses of atropine Sulphate. Symptoms of lung oedema may not appear for several hours.

Do not give morphine, aminophylline, phenothiazines, reserpine, furosemide, or ethacrynic acid. Drugs like 2-Pam are not effective in poisoning with carbofuran and should not be used.

Treat symptomatically and supportively.

Establish clear airway and tissue oxygenation by aspiration of secretions, and if necessary, by assisted pulmonary ventilation with oxygen. Improve tissue oxygenation as much as possible before administering the antidote to minimise the risk of ventricular fibrillation. The following antidote is recommended - give atropine sulphate 2–4 mg (adult) applied intravenously, repeated by 10-minute intervals until atropinization (dry, flushed skin and tachycardia) appears. Maintain atropinization by repeated doses for 2–12 hours, or longer, depending on the severity of poisoning. Pralidoxime (2-PAM, Protopam) and other oximes are contra-indicated.

### Symptoms of human poisoning

Acute health effects: Symptoms of exposure to the product could include weakness, sweating, nausea and vomiting, abdominal pain and blurred vision. High levels of exposure could cause muscle twitching, loss of coordination and may cause breathing to stop.

Long-term effects: Carbofuran may affect the nervous system.

### Note to physician

**CARBODAN 10 GR** is a potent, rapidly reversible cholinesterase inhibiting pesticide.

NOTICE TO THE USER: This agricultural remedy is to be used only in according to the directions of this label. It is an offense under the Act to use this product inconsistent with the directions on the label.

### RESISTANCE WARNING

For the purpose of resistance management, **CARBODAN 10 GR** is classified as a group code 1A insecticide. Any insect population may contain individuals naturally resistant to **CARBODAN 10 GR** 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 **CARBODAN 10 GR** or any other group code 1A insecticide.

To delay insecticide resistance:

- Avoid exclusive repeated use of insecticides from the same insecticide group code. Alternate 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.

### MODE OF ACTION

Carbofuran is an acetylcholinesterase (AChE) inhibitor of the carbamate subgroup.

AChE is the enzyme that terminates the action of the excitatory neurotransmitter acetylcholine at the nerve synapses. Inhibition of AChE causes hyperexcitation in the target organism.

### RESTRICTED USES

**Use only as indicated.**

#### General

- Apply only by using a correctly calibrated granular applicator. Check delivery of granules several times during application. The downpipes of the applicator should be set at an angle which ensures a free, even flow of granules into the plant furrow. To avoid blockages regular checks should be made.
- Sufficient soil moisture must be present to activate the active ingredient.
- A remedy like SERVUS (Reg. no. L7271) should be applied for the control of cutworm.
- Under conditions of high pressure, black maize beetle might not be controlled sufficiently.

#### Compatibility

**CARBODAN 10 GR** should not be mixed with granular fertilizer and applied with the same applicator.

## APPLICATION RATES

CROP AND TARGET	DOSAGE	REMARKS
<b>Cabbage</b> Diamondback moth larvae ( <i>Plutella xylostella</i> ) Bagrada bug ( <i>Bagrada hilaris</i> )	200 g/100 m linear row	Apply immediately before transplanting with a correctly calibrated granular applicator. Ensure that the granules are distributed evenly in the plant furrow. Do not use on quick maturing varieties. Refer to section under Cabbages under WARNINGS.
<b>Grain sorghum</b> False wire worms ( <i>Tenebrionidae</i> spp.)  Nematodes (Various spp.)  Stalk borer ( <i>Busseola fusca</i> ) Shootfly ( <i>Anatrichus erinaceus</i> ) <i>Astylus</i> larvae Black maize beetle ( <i>Heteronychus arator</i> )	100 g/100 m linear row  150 g/100 m linear row  200 g/100 m linear row	Apply at planting in the plant furrow with a correctly calibrated granular applicator. Will also suppress nematodes. Refer to section under grain sorghum under "WARNINGS"  Apply at planting in the plant furrow with a correctly calibrated granular applicator. Will also control false wire worm and suppress stalk borer and black maize beetle. Refer to section under grain sorghum under "WARNINGS".  Apply at planting in the plant furrow by means of a correctly calibrated granular applicator. Will also control false wire worm and nematodes. Under conditions of high infestation levels black maize beetle and <i>Astylus</i> , control might not be sufficient. Where high infestations are expected, seed should be treated with a suitable registered remedy. Refer to section under grain sorghum under "WARNINGS"
<b>Maize and sweetcorn</b> False wire worms ( <i>Tenebrionidae</i> spp.) Maize rootworm ( <i>Buphonella nigroviolacea</i> )  Nematodes (Various spp.) Leafhopper ( <i>Cicadulina mbila</i> ) Ground weevils ( <i>Protostrophus</i> spp.)	100 g/100 m linear row  150 g/100 m linear row	Apply only at planting in the plant furrow onto seed by means of a correctly calibrated granular applicator. Will also suppress nematodes and leafhopper. Refer to section under Maize under "WARNINGS"  Apply only at planting in the plant furrow onto seed by means of a correctly calibrated granular applicator. Will also control false wire worm and maize root worm and suppress stalk borer and black maize beetle. Refer to section under maize under WARNINGS.





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CROP AND TARGET	DOSAGE	REMARKS
<p><b>Maize continues.</b>  <i>Astylus</i> larvae            Stalk borer            (<i>Busseola fusca</i>)            Black maize beetle            (<i>Heteronychus arator</i>)</p>	<p>200 g/100 m linear row</p>	<p>Apply only at planting in the plant furrow onto seed by means of a correctly calibrated granular applicator. Under conditions of high population pressure of <i>Astylus</i> larvae and black maize beetle, control might not be sufficient.</p> <p>Where high infection pressures of the above mentioned pests are expected, the seed should be treated with a registered remedy. False wire worm, maize root worm, nematodes, leafhoppers and ground weevils will be controlled by this treatment. Refer to section under maize under “WARNINGS”</p>
<p><b>Potatoes</b>            Black maize beetle            (<i>Heteronychus arator</i>)            Millipedes            (<i>Diploda</i> spp.)</p>	<p>200 g/100 m linear row</p>	<p>Limited control for a limited period of time can be expected for the control of black maize beetle and Millipedes. Apply only at planting on both sides of the plant furrow to ensure thorough mixing of the granules with the soil above the seed. Use other registered chemicals for further control later in the season.</p> <p>Refer to section under potatoes and maize under WARNINGS.</p>
<p><b>Sugarcane</b>            Nematodes            (Various spp.)</p>	<p><b>Plant cane</b>            30 kg/treated ha</p> <p><b>Ratoon cane</b>            25 kg/treated ha</p>	<p>Apply at planting in the plant furrow by means of a suitable correctly calibrated granular applicator. Cover furrow immediately after planting. The rate per linear meter plant row depends on the row spacing:</p> <p>3.0 g/m linear row for 1.0 m spacing            3.6 g/m linear row for 1.2 m spacing            4.2 g/m linear row for 1.4 m spacing            4.8 g/m linear row for 1.6 m spacing</p> <p>Apply by means of a suitable correctly calibrated granular applicator in a shallow furrow (5–10 cm deep) in moist soil to one or both sides of the furrow. Cover granules with soil. Application should take place in summer immediately after cutting the crop while in crops cut in winter (May to August), application should take place not later than 120 days after cutting the crop when the first spring rain is expected.</p> <p>The rate per linear meter plant row depends on the row spacing:</p>





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CROP AND TARGET	DOSAGE	REMARKS
		<p>2.5 g/m linear row for 1.0 m spacing. 3.0 g/m linear row for 1.2 m spacing. 3.5 g/m linear row for 1.4 m spacing. 4.0 g/m linear row for 1.6 m spacing.</p> <p>Refer to section under sugarcane under WARNINGS.</p>
<p><b>Oriental tobacco</b> Western Cape only Thrips (<i>Thrips tabaci</i>)</p>	<p>200 g/100 m linear row</p>	<p>Apply at transplanting in the plant furrow or immediately after planting in a band <math>\pm</math> 8 cm wide over the plants by means of a suitable correctly calibrated granular applicator. Where sandy soils occur preference is given to applying over the plant row provided the active ingredient is leached into the soil by rain or overhead irrigation. Do not use on transplants from seed trays. Root knot nematodes (<i>Meloidogyne</i> spp.) will also be suppressed. Refer to section under tobacco under WARNINGS.</p>
<p><b>Tobacco</b> American bollworm (<i>Helicoverpa armigera</i>)</p>	<p>200 g/100 m linear row</p>	<p>Apply at transplant in the plant furrow by means of a suitable correctly calibrated granular applicator. Do not use on transplants from seed trays. Will control bollworm for a period of up to 6–7 weeks after planting. Will suppress root knot nematodes (<i>Meloidogyne</i> spp.) Refer to WARNINGS in the tobacco section.</p>