CARBOFURAN 100 GR

A systemic granule insecticide and nematicide for the control of the pests mentioned on the crops listed.

’n Sistemesie korrel insek- en aalwurmdoder vir die beheer van die genoemde plae op gewasse soos genoem.

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

ACTIVE INGREDIENT / AKTIEWE BESTANDDEEL:
Carbofuran (carbamate)

.................................................................100 g/kg

Karbofuran (karbamaat)

Net volume / Netto volume :

kg

Registration holder / Registrasiehouer:
VILLA CROP PROTECTION (PTY) LTD
PO Box / Posbus 10413
KEMPTON PARK, 1620
TEL: (011) 396 2233

Batch No:
Date of formulation:

UN number: 2757

HAznRFul
SHKDFlJK

Vir volledige besonderhede, sien ingeslote pamflet.
For full particulars, see enclosed leaflet.
CARBOFURAN 100 GR
Reg. No. L 7182 Act/Wet No. 36/1947
IRAC INSECTICIDE GROUP CODE: / IRAC INSEKDOODER GROEPKODE: 1A

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HARMFUL

WARNINGS

Maize and Cabbage
Apply only at planting time. Do not harvest cabbages within 11 weeks after application. Do not use on quick maturing cabbage cultivars. Do not allow animals to feed on treated maize plants within 8 weeks of application under normal rainfall conditions. Should drought conditions prevail after planting consult your nearest Technical Adviser, before allowing animals to graze.
In the case of maize and cabbages control of stalk borer and diamond backed moth larvae respectively can be expected to decline from 7 to 8 weeks after application.

Wheat
Apply only at planting time. Do not harvest wheat within 120 days after application. Do not allow treated wheat to be grazed within 120 days after application.

Sugarcane
Apply only at planting time or within 120 days of harvesting the previous crop of sugarcane. Make only one application per crop at time of planting and allow 180 days between treatment of sugarcane and harvest. At planting ensure that the set placement is not less than 7.5 cm beneath soil surface.

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 can be expected to decline from 7 to 8 weeks after application.

Tobacco
Apply only at planting time and not later than one week after planting in light sandy soil. Do not harvest within 80 days of treatment.
CARBOFURAN 100 GR should not be used on tobacco transplants, which originate from seed trays.

Sunflowers
Apply only at planting time, do not harvest within 11 weeks after application.

Potatoes
Apply only at planting time, do not harvest within 90 days after application.

Note: The maximum residue levels (MRL’s) will not be exceeded provided applications are applied as prescribed. When production is destined for the export market, the export agency of concern must be contacted, prior to the use of CARBOFURAN 100 GR in a spray programme.

• The efficacy of CARBOFURAN 100 GR may be adversely affected, when used in alkaline, brackish, or soils of high pH (above pH 7).
• Not to be used as a seed dressing.
• Handle with extreme care.
• Poisonous when absorbed through the skin or swallowed or inhaled.
• Toxic to fish, bees and wildlife.
• To prevent bird poisoning ensure, that granules are covered immediately.
• Take special precautions at the end of the planting furrow where spillage may occur.
• Store in a cool, dry well-ventilated place in the original container, tightly closed and secured.
• Store under lock and key, away from food, feeds, seed, fertilizer and other agricultural remedies.
• Keep out of reach of children, uninformed persons and animals.
• Ensure that no edible crop is planted on treated ground or within 10 metres of treated area within 100 days of application.
• Inform staff (labourers, wives and children) of the potential danger of product and give full instructions on what to do in case of poisoning.
• Mark treated areas with appropriate danger signs.
• 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.

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
• Avoid skin contact with the granules as well as inhalation of dust.
• Wear protective clothing – overall, rubber gloves, -boots and a suitable respirator, when handling the product and preparing the spray mixture.
• Wash with soap and water after use and after accidental skin contact.
• Wash contaminated clothing after use.
• Keep unprotected persons away from operating area.
• 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 or areas not under treatment or to nearby water sources.
• Clean applicator after use or before using with other remedies.
• Thoroughly clean spraying equipment directly after use and dispose of wash water where it will not contaminate food, grazing, boreholes, rivers or dams.
• Invert the empty container over the spray or mixing tank to make sure container is empty before destroying the container.
• Dispose of wash water where it will not contaminate crops, grazing, rivers, dams, etc.
• Destroy empty container by perforation and flattening.
• Containers and packages must be completely emptied before being disposed of.
• Destroy the empty container by perforation and flattening and dispose of it in a safe way.
• Never re-use the empty container for any other purpose.
• Prevent contamination of food, feed, drinking water and eating utensils.

SYMPTOMS OF HUMAN POISONING
Headache, fatigue, faintness, giddiness, excessive sweating, nausea, abdominal pain, vomiting, blurred vision, muscle twitching, usually small pupils, respiratory distress, coma.

FIRST AID TREATMENT
• Remove patient from source of poisoning and keep him quiet and reassured.
• Skin contact: Remove contaminated clothing and rinse contaminated body area thoroughly with plenty of soap and cold water. Do not rub skin.
• Eye contact: Flush contamination out of eyes with clean water for 15 minutes.
• If swallowed induce vomiting by tickling the back part of the throat. Repeat until vomit is clear and free from smell of poison.
• Administer artificial respiration or closed cardiac message if necessary.
• Do not apply direct mouth to mouth respiration.
• Never give anything by mouth to an unconscious person.
• Take patient too nearest physician immediately.
NOTE TO PHYSICIAN
Atropine sulfate 2 to 4 mg (adult) intravenously, repeated at 10 minute intervals until atropinization (dry flushed skin and tachycardia) appears. Pralidoxime (2-PAM Protopam) and other oximes are contra-indicated.

RESISTANCE WARNING
For resistance management, CARBOFURAN 100 GR is a group code 1A insecticide. Any insect population may contain individuals naturally resistant to CARBOFURAN 100 GR and other group code 1A insecticide. The resistant individuals can eventually dominate the insect population if these insecticides are used repeatedly. These resistant insects may not be controlled by CARBOFURAN 100 GR or any other group code 1A insecticide.
To delay insecticide resistance:
• avoid exclusive repeated use of insecticide from the same insecticide group code. Alternate or tank mix with products form 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 directed.
• An accurate, properly calibrated granule-applicator must be used. Downpipes from applicator into seeding furrow should be set at a sufficiently steep angle to ensure even flow of granules. Regular checks are advised to prevent blockages. Ensure an even distribution of the granules.
• As with all soil-applied insecticides, sufficient moisture is necessary for the release of the active ingredient.
• It is recommended that producers apply suitable cutworm bait as recommended for cutworm control after planting and before germination to ensure an optimal stand.

Compatibility:
CARBOFURAN 100 GR should not be mixed and applied simultaneously with fertilizer from a single granule applicator.
### APPLICATION RATES

<table>
<thead>
<tr>
<th>Crop/Pest</th>
<th>Dosage rate</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cabbage</strong></td>
<td></td>
<td></td>
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<tr>
<td>Diamond-back moth larvae (Plutella maculipennis)</td>
<td>200 g/100 m linear in furrow at planting</td>
<td>Apply immediately prior to transplanting. Ensure that the granule applicator is properly calibrated and that the stream of granules into the plant furrow is regular at all times and below the soil surface.</td>
</tr>
<tr>
<td><strong>Grain Sorghum False Wireworms</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nematodes</td>
<td>100 g/100 m linear in furrow at planting</td>
<td>Will also suppress Nematodes.</td>
</tr>
<tr>
<td>Stalk borer (Busseola fusca), Astylus larvae, Black Maize Beetle (Heteronychus spp.) and Shoot fly (Anatrichus erinaceus)</td>
<td>150 g/100 m linear in furrow at planting</td>
<td>Will also suppress stalk borer and black maize beetle.</td>
</tr>
<tr>
<td><strong>Maize and Sweetcorn False Wireworms and Maize Rootworm (Buphonella murina)</strong></td>
<td>200 g/100 m linear in furrow at planting</td>
<td>Will also suppress nematodes and leafhoppers.</td>
</tr>
<tr>
<td>Leathoppers (vectors of streak disease), Nematodes and Groundweevils (Protostrophus spp.)</td>
<td>150 g/100 m linear in furrow at planting</td>
<td>Will also suppress Stalk borer and Black maize beetle. See Note 4. hereunder for remarks regarding leathoppers.</td>
</tr>
<tr>
<td>Astylus larvae, Stalk borer (Busseola fusca) and Black Maize Beetle (Heteronychus spp.)</td>
<td>200 g/100 m linear in furrow at planting</td>
<td>Under known high infection pressure of Astylus larvae it is recommended to treat seed with appropriate seed dressing product specifically registered for this purpose. See label applicable for directions for use. See Note 3. hereunder for remarks regarding black maize beetle.</td>
</tr>
</tbody>
</table>

**NOTE:**

1. Ensure that the granule-applicator is regularly calibrated and that the stream of granules into the plant furrow is regular at all times.
2. The granules should be applied directly onto the seed in the furrow.
3. Application of products for the control of black maize beetle is extremely critical. **Ensure that application equipment is properly calibrated. Dosage rate must be checked several times each day.**
   Notwithstanding the use of this product, black maize beetle damage should still be expected. Under conditions of high population pressure up to 20% or more of the maize crop may be damaged or destroyed, in spite of having been treated.
4. There may not be adequate control of leathoppers (vectors of streak disease) on maize, and the incidence of streak may still occur, especially on very susceptible cultivars, particularly sweetcorn varieties, and parent breeding lines used in seed maize. This is particularly so:
   A. When infestation pressure is high, as a result of:
      (ii) close proximity of host plants, such as wheat or sugarcane;
      (ii) mid-summer planting, when naturally occurring populations of leathoppers are very high.
   B. When **CARBOFURAN 100 GR** is used in soils of high pH (see "WARNINGS")

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<td><strong>Oriental Tabacco; (Western Cape) Thrips</strong> (Vectors of Spotted Wilt Disease)</td>
<td>200 g/100 m linear in furrow at planting</td>
<td>Apply in planting furrow at planting or in a band ± 8 cm wide over the plant-row immediately after planting. In case of light, sandy soils preference should be given to the application over the plant-row but with this method it is necessary that the compound be leached immediately into the soil either through rain or sprinkler irrigation (± 10 mm). Will also suppress Meloidogyne spp. Nematodes.</td>
</tr>
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<td>Crop/Pest</td>
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</tr>
<tr>
<td><strong>Potatoes</strong>&lt;br&gt;Black Maize Beetle (<em>Heteronychus spp.</em>) and Millipedes</td>
<td>200 g/100 m linear in furrow at planting.</td>
<td>Limited control of Black Maize Beetle and Millipedes, with CARBOFURAN 100 GR applied at planting can be expected for a limited period. CARBOFURAN 100 GR to be applied at planting to both sides of the planting to furrows so as to ensure thorough mixing of the granules with the soil above the seed. Spray of a registered chemical is recommended for further control later in the season. Notwithstanding the use of the CARBOFURAN 100 GR damage by Black Maize Beetle should still be expected.</td>
</tr>
<tr>
<td><strong>Sugarcane</strong>&lt;br&gt;Plant cane Nematodes</td>
<td>30 kg/ha applied as a row treatment at planting. <strong>Apply:</strong> &lt;ul&gt;&lt;li&gt;3.0 g/m of row for 1 m spacing;&lt;/li&gt;&lt;li&gt;3.6 g/m of row for 1.2 m spacing;&lt;/li&gt;&lt;li&gt;4.2 g/m of row for 1.4 m spacing;&lt;/li&gt;&lt;li&gt;4.8 g/m of row for 1.6 m spacing.&lt;/li&gt;&lt;/ul&gt;</td>
<td>Rate per linear metre depends on row spacing. Apply by means of a suitable calibrated granule applicator into the planting furrow prior to planting and cover the furrow immediately after planting.</td>
</tr>
<tr>
<td><strong>Ratoon cane</strong>&lt;br&gt;Nematodes</td>
<td>25 kg/ha applied to one or both sides of the cane furrow. <strong>Apply:</strong> &lt;ul&gt;&lt;li&gt;2.5 g/m of row for 1.0 m spacing;&lt;/li&gt;&lt;li&gt;3.0 g/m of row for 1.2 m spacing;&lt;/li&gt;&lt;li&gt;3.5 g/m of row for 1.4 m spacing;&lt;/li&gt;&lt;li&gt;4.0 g/m of row for 1.6 m spacing.&lt;/li&gt;&lt;/ul&gt;</td>
<td>Rate per linear metre depends on row spacing. Apply with mechanical applicator to moist soils not later than 120 days after cutting the previous crop. Crops cut in summer should be treated immediately. Crops cut between May and August may be treated after the first spring rains. Apply the CARBOFURAN 100 GR in a shallow furrow (5 to 10 cm deep) close to the cane row (but avoiding excessive mechanical damage to the stools and roots) and cover immediately.</td>
</tr>
<tr>
<td><strong>Sunflower</strong>&lt;br&gt;Nematodes</td>
<td>100 g/100 m linear in furrow at planting</td>
<td>Apply at planting. Refer remarks 1 and 2 under maize.</td>
</tr>
<tr>
<td><strong>Tobacco</strong>&lt;br&gt;American bollworm (<em>Helicoverpa armigera</em>)</td>
<td>200 g/100 m linear in furrow at planting</td>
<td>Apply in the planting furrow at planting. Will control bollworm for a period of 6 to 7 weeks after planting.</td>
</tr>
<tr>
<td><strong>Wheat</strong>&lt;br&gt;Irrigated and Dryland Nematodes</td>
<td>30 g/100 m linear in furrow at planting</td>
<td>Apply under the seed in planting furrow at planting. Ensure that the granule applicator is properly calibrated and that the stream of granules into the plant furrow is regular at all times below the soil surface.</td>
</tr>
<tr>
<td></td>
<td>10 kg/ha</td>
<td>Apply at planting or immediately thereafter with a properly calibrated “GANDY RHOBANDER” granular applicator and incorporate immediately either by sufficient irrigation or by shallow mechanical incorporation e.g. harrows.</td>
</tr>
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</table>