METHOMYL 90 SP

Reg. No. L 7189 Act/Wet No. 36 of/van 1947
N-AR 1084

A water-soluble powder insecticide for the control of pests on
crops as indicated.

’n Wateroplosbare insekdoder poeier vir die beheer van plae op
gewasse soos aangedui.

ACTIVE INGREDIENT / AKTIEWE BESTANDDEEL
methomyl (carbamate) 900 g/kg metomil (karbamaat)

IRAC INSECTICIDE GROUP CODE 1A  IRAC INSEKDODER GROEPKODE

Registration holder / Registrasiehouer:
Villa Crop Protection (Pty) Ltd.
PO Box / Posbus 10413, Aston Manor, 1630
Tel: 011 396 2233
Website / Webblad: www.villacrop.co.za

UN Number: 2757
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VILLA CROP PROTECTION (PTY) LTD.
PO Box / Posbus 10413
ASTON MANOR, 1630
Tel. (011) 396 2233

VERY TOXIC  UITERS GIFTIG

WARNINGS

Withholding periods:

<table>
<thead>
<tr>
<th>Crop Type</th>
<th>Minimum Time (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cruciferae</td>
<td>4</td>
</tr>
<tr>
<td>Potatoes</td>
<td>3</td>
</tr>
<tr>
<td>Grain sorghum, Maize, Pastures, Wheat, Lupins, Lucerne and Flue-cured tobacco</td>
<td>7</td>
</tr>
<tr>
<td>Air-cured tobacco</td>
<td>14</td>
</tr>
<tr>
<td>Citrus (20 g per 100 l dosage)</td>
<td>2</td>
</tr>
<tr>
<td>Citrus (higher than 20 g per 100 l dosage)</td>
<td>28</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>2</td>
</tr>
<tr>
<td>Green Beans</td>
<td>14</td>
</tr>
<tr>
<td>Peaches</td>
<td>16</td>
</tr>
</tbody>
</table>

NOTE
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 FRUIT EXCEEDING THE IMPORT TOLERANCES OF OTHER COUNTRIES.

METHOMYL 90 SP MAY CAUSE YELLOWING OF LEAF TIPS USED ON CERTAIN CARNATION VARIETIES. DO NOT USE METHOMYL 90 SP IN COMBINATION WITH G49 WETTING AGENT ON TOBACCO SEEDBEDS OR ON CITRUS.

- Handle with extreme care.
- Poisonous by contact, swallowing or inhalation.
- A small quantity may be fatal if swallowed or inhaled.
- Toxic to fish, bees and wildlife.
- Flammable - do not store or spray near open flames.
- Store under lock and key in a cool, dry place, away from food, feeds, fertilizers and drinking water.
- Keep container well closed.
- Keep out of reach of animals, children and uninformed persons.
- Re-entry: Do not enter treated area within 2 days after treatment unless wearing protective clothing.
- In case of poisoning call a doctor immediately and make this label available to him/her.

Aerial application
Notify all inhabitants in the immediate area to be sprayed and issue the necessary warnings. Do not spray over or allow drift to contaminate adjacent areas e.g. crops, rivers, dams and wetlands.
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 climatic and storage conditions, quality of dilution water, compatibility with other substances not indicated on the label and the occurrence of resistance of the pests to 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 spray mist, vapour or dust.
• Avoid contact with eyes, skin or clothing.
• Wear protective clothing - suitable overalls, rubber boots, gloves, a face shield and a respirator.
• Wash contaminated clothing daily.
• Wash immediately with soap and water after use.
• Do not eat, drink or smoke whilst applying or mixing or before washing hands and face and change of clothing.
• Prevent drift onto other crops, grazing, rivers, dams or areas not under treatment.
• Clean the applicator after use and before using it for other remedies.
• Invert the empty container over the spray or mixing tank to make sure container is empty before destroying the container.
• Rinse the empty container and container used for measurement three times with a volume of water equal to a minimum of a third of that of the container. Dispose of wash water where it will not contaminate crops, grazing, rivers, dams, etc.
• Destroy the empty container by perforation and flattening and dispose of it in a safe way.
• Never re-use the container for any other purpose.
• Prevent contamination of food, feeds, drinking water and eating utensils.

SYMPTOMS OF HUMAN POISONING
Headache, fatigue, faintness, giddiness, excessive sweating, nausea, abdominal pains, vomiting, diarrhoea, tightness of the chest, anxiety, blurred vision, muscle twitching beginning in the eyelids and tongue, small pupils, respiratory distress, convulsions, coma.

FIRST AID TREATMENT
• Remove the patient from the source of poisoning to a well-ventilated area and keep him/her calm and reassured.
• Skin contact: Remove contaminated clothing and rinse the contaminated body area thoroughly with plenty of soap and cold water. Do not rub the skin.
• Eye contact: Flush contamination out of eyes with clean water for at least 15 minutes.
• If swallowed: If swallowed, induce vomiting by tickling the back part of the throat. Repeat until vomit fluid is clear and free from smell of poison. Administer artificial respiration or closed chest cardiac massage if necessary. Do not apply mouth-to-mouth respiration.
• Never give anything by mouth to an unconscious person.
• Take the patient to the nearest physician immediately.

NOTE TO PHYSICIAN
Administer 2 to 4 mg (adult) atropine sulphate, intravenously and repeat at 10 minutes intervals until signs of atropinisation (dry, flushed skin and tachycardia) occur. Pralidoxime (2-PAM, Protopam) and other oximes are contra-indicated.

RESISTANCE WARNING
METHOMYL 90 SP is a group code 1A insecticide. Any insect population may contain individuals naturally resistant to METHOMYL 90 SP 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 METHOMYL 90 SP 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.

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

**Mixing instructions:**
- Add the required quantity of METHOMYL 90 SP to a half-full spray tank and mix thoroughly and fill up slowly while agitating (mechanical or hydraulic).
- Commence agitating mixture a few minutes before starting to spray.
- Agitation is necessary to completely dissolve the insecticide.
- Spraying should be carried out preferably on dry, windless days and the crops should be thoroughly wetted.

**General directions:**
- Use at all times correctly calibrated and suitable equipment in good working condition, to ensure wetting of all parts of the plant thoroughly.

**Aerial application:**
Aerial application of METHOMYL 90 SP 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 cm² 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 the 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:
  a) reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage),
  b) 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.
<table>
<thead>
<tr>
<th>Crop / Pest</th>
<th>Dosage Rate</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cruciferae</td>
<td>Larvae of the Diamond-back moth, Greater cabbage moth and Aphids</td>
<td>50 g / 100 l water</td>
</tr>
<tr>
<td>African bollworm</td>
<td></td>
<td>250 g / ha</td>
</tr>
<tr>
<td>Carnations</td>
<td>Carnation worm</td>
<td>100 g / 100 l water</td>
</tr>
<tr>
<td>Beans</td>
<td>African bollworm</td>
<td>250 g / ha</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50 g / 100 l water</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>Leafminer, African bollworm, Plusia looper, Aphids &amp; Thrips</td>
<td>50 g / 100 l water</td>
</tr>
<tr>
<td>Citrus</td>
<td>Aphids &amp; African bollworm</td>
<td>20 g / 100 l water</td>
</tr>
<tr>
<td></td>
<td>Mealybug</td>
<td>20 g / 100 l water</td>
</tr>
<tr>
<td>Orange dog caterpillar</td>
<td></td>
<td>25 g / 100 l water</td>
</tr>
<tr>
<td>Red scale</td>
<td></td>
<td></td>
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<tr>
<td>Soft green scale</td>
<td></td>
<td></td>
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<tr>
<td>Waxy scale</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roses</td>
<td>Aphids</td>
<td>25 g / 100 l water</td>
</tr>
<tr>
<td>Crop / Pest</td>
<td>Dosage Rate</td>
<td>Remarks</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------</td>
<td>---------</td>
</tr>
<tr>
<td><strong>Peaches</strong></td>
<td>50 g / 100 l water</td>
<td>Early cultivars: Apply two sprays ensuring that trees are thoroughly wetted. Apply the first spray 4 weeks before harvest and the second 10 days later. Also apply a registered product for Fruit fly control. Late cultivars: Apply three sprays beginning 6 weeks before harvest and repeat at 10-day intervals. Ensure good coverage of the trees. Also apply a registered product for Fruit fly control.</td>
</tr>
<tr>
<td><strong>Tobacco</strong></td>
<td>50 g / 100 l water</td>
<td><strong>Ground application:</strong> Apply when pests are noticed. For Leafminer, spray weekly and ensure thorough wetting of the plants. Apply up to 500 litres spray mixture per hectare.</td>
</tr>
<tr>
<td>Leafminer, African bollworm, Tobacco slug &amp; Stinkbug</td>
<td>250 g / ha</td>
<td><strong>Aerial application:</strong> Apply up to 1000 litres spray mixture per hectare.</td>
</tr>
<tr>
<td><strong>Potatoes</strong></td>
<td>300 to 500 g / ha</td>
<td><strong>Aerial application:</strong> Apply in 30 litres water per hectare. Use the higher dosage if the spray intervals exceed 1 week. For tuber moth, begin application as soon as the plants are 1 month old or sooner with early infestations and repeat applications weekly throughout the growing season. Covering of tubers by ridging is important particularly against Tuber moth. For African bollworm one application is adequate to control a single outbreak. If further outbreaks occur, repeat application. <strong>Ground application:</strong> Ensure a good coverage and wetting of the plants. Apply up to 1000 litres spray mixture per hectare.</td>
</tr>
<tr>
<td><strong>Veldt and Grazing</strong></td>
<td>50 g / ha</td>
<td><strong>Ground application:</strong> Apply in 400 litres water as soon as the pest is observed.</td>
</tr>
<tr>
<td>Army worms</td>
<td>200 g / ha</td>
<td><strong>Aerial application:</strong> Apply in 30 litres water per hectare as soon as the pest is observed. Repeat as necessary. <strong>Ground application:</strong> Low volume. Apply in 100 to 200 litres water per hectare.</td>
</tr>
<tr>
<td>Grain sorghum, Wheat, Lupins and Lucerne</td>
<td>200 g / ha</td>
<td><strong>Aerial application:</strong> Apply in 30 litres water per hectare as soon as the pest is observed. Repeat as necessary. <strong>Ground application:</strong> Low volume. Apply in 100 to 200 litres water per hectare.</td>
</tr>
<tr>
<td><strong>Maize</strong></td>
<td>200 g / ha</td>
<td><strong>Aerial application:</strong> Apply in 30 litres water per hectare as soon as larvae are observed on the silks. METHOMYL 90 SP will not control larvae, which have already entered the cob. <strong>Ground application:</strong> Low volume. Apply in 100 to 200 litres water per hectare.</td>
</tr>
</tbody>
</table>