DIMILIN SC® 48
Reg. No.: L7140 Act/Wet No. 36 of/van 1947

A suspension concentrate chitin deposition inhibitor (CDI) contact insecticide for the control of potato tuber moth larvae (*Phthorimaea operculella*) in potatoes and Fall Armyworm on maize, sweetcorn and potatoes

IRAC INSECTICIDE GROUP CODE: A15
IRAC INSEKDODERGROEP KODE: AC

ACTIVE INGREDIENT/ AKTIEWE BESTANDDEEL:
Diflubenzuron (benzoyleurea) 480 g/ℓ Diflubensuron (bensoïelurea)

Registration holder / Registrasiehouer:
ARYSTA LifeScience South Africa (Pty) Ltd
7 Sunbury Office Park,
off Douglas Saunders Drive,
La Lucia Ridge, South Africa, 4019
Tel: 031 514 5600

Contents/Inhoud

Batch No. / Lot Nr.: 
Date of manufacture: / Datum van vervaardiging:

U.N. No. 3082

READ THE LABEL IN DETAIL BEFORE OPENING THE CONTAINER. / LEES DIE ETIKET VOLLEDIG VOORDAT DIE HOUDER OOPEN GEMAAK WORD.
For full particulars, see enclosed leaflet. / Vir volledige besonderhede, sien ingeslote pamflet
WARNINGS:

- **Potatoes**: Allow a minimum of **9 days** between the last application and harvest.
- **Maize**: Allow a minimum of **15 days** between the last application and harvest.
- Handle with care.
- May cause slight eye irritation.
- Avoid excessive drift (see precautions).
- Keep out of reach of children and away from uninformed persons and animals.
- Keep away from food, drink and feed.
- Store in a cool dry place.
- **Re-entry Interval**: Do not enter treated area until spray deposit has dried without wearing protective clothing.
- **Aerial Application**: Notify all inhabitants in the immediate vicinity of the area to be sprayed and issue the necessary warnings. Do not spray over or allow the 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 climatic and storage conditions, quality of dilution water, compatibility with other substances not indicated on the label, 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:

- Avoid inhalation of spray mist while spraying.
- Avoid contact with eyes and excessive contact with the skin.
- Wear rubber gloves and face shield when handling concentrate.
- Do not eat, drink or smoke whilst mixing, applying or before washing hands and face and change of clothing.
- Avoid drift of spray mist onto other crops, grazing, rivers, dams or areas not under treatment.
- Clean applicator before using for other remedies. Dispose of wash water where it will not contaminate crops, grazing, rivers and dams.
- Prevent contamination of food, feed, drinking water and eating utensils.
- Rinse empty container three times with a volume of water equal to at least 10% of that of the container and add the rinsings to the contents of the spray tank before disposing of the container.
- Destroy empty container by perforation and flattening. Do not re-use for any other purpose.

Mode of Action:

**DIMILIN® SC 48** interferes with the formation of chitin during the larval stages of insect development, as well as with the ovicidal activities (direct and transovarial - "through the female").

**DIMILIN® SC 48** is predominantly a stomach poison. In some cases, the compound shows ovicidal activity, through contact, by treatment of the female adult.

**DIMILIN® SC 48** does not act immediately. Affected larvae behave normally until a moult is due, and death occurs at moulting or pupation.

**DIMILIN® SC 48** is not effective against adult insects. In general, insect parasites and predators are not affected by **DIMILIN® SC 48**.

**DIMILIN® SC 48** treatments should be directed against the larval stages of the target species, and
sprays should be applied as early as possible, preferably before or during egg deposition. **DIMILIN® SC 48** has minimal activity on the beneficial insect complex. **DIMILIN® SC 48** has a favorable degradation pattern in water and soil. Collectively, these benefits contribute to the product being a key chemical in Integrated Pest Management (IPM) strategies for controlling potato tuber moth.

**Environment:**

**DIMILIN® SC 48**, when used in potatoes, combines a high activity on harmful insects with a high selectivity to non-target organisms. **DIMILIN® SC 48** has a low toxicity to mammals, birds, fish, honeybees and most aquatic invertebrates with the exception of small crustaceans (water fleas), and hence its effect on the environment is low.

**Resistance warning:**

For resistance management, **DIMILIN® SC 48** is a group **A15** insecticide. Any insect population may contain individuals naturally resistant to **DIMILIN® SC 48** and other group code **A15** insecticides. The resistant individuals can eventually dominate the insect population if these insecticides are used repeatedly. These resistant insects may not be controlled by **DIMILIN® SC 48** or any other group code **A15** insecticide.

To delay insecticide resistance:

- Avoid exclusive repeated use of insecticides from the same insecticide group code. Alternate or tank mix with registered 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.

**Compatibility:**

**DIMILIN® SC 48** is compatible with Emma (L9022) and Silhouette (L8654). Due to unknown factors, such as water, pH, other product formulation changes, etc., a compatibility test should be carried out prior to application with products not listed here.

**MIXING INSTRUCTIONS:**

**Shake well before use.** Fill the tank half with water, add the required volume of **DIMILIN® SC 48** and agitate thoroughly. Add the rest of the water. Maintain proper agitation during final filling up and during application.

**Application Instructions:**

**Ground Application:**

- **DIMILIN® SC 48** can be applied by tractor sprayers with boom and nozzles and knapsack sprayers.
- Avoid spraying during the heat of the day.
- Once the **DIMILIN® SC 48** has dried on the plant, it will be rain-fast.
- It is also important to calibrate the equipment to ensure that the correct dosage is applied and
that the spray mixture is distributed evenly over the target area.

**Aerial Application:**

**DIMILIN® SC 48** may only be applied aerially by a registered Aerial spraying operator with a correctly calibrated registered aircraft according to the instructions of SANS Code 0118 (Aerial Application of Agricultural Pesticides). Ensure that the spray mixture is distributed evenly over the target area and that loss of the spray mixture during application is limited to the minimum. It is therefore important to adhere to the following criteria:

- The height of the spray boom must be maintained at 3 to 4 meters above the target. Do not spray when the aircraft is climbing, diving or banking.
- Use appropriate nozzles/atomizers that will produce the correct droplet size and coverage. The spraying system must produce a droplet spectrum with lowest possible Relative Span.
- All nozzles/atomizers must be positioned 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 must not exceed 8°C.
- Stop spraying if the wind speed exceeds 15 km/h.
- Stop spraying during turbulent, unstable and dry conditions during the heat of the day.
- Note that the aerial application of **DIMILIN® SC 48** under temperature inversion conditions (spraying above or within the inversion layer) and/or very high humidity (relative humidity 80% or more) may result in the following:
  - Reduced efficacy due to suspension of the droplets in the air (insufficient coverage on target area).
  - Damage to other sensitive areas due to the spray cloud drifting away from the target area to such areas.
  - Ensure that the aerial spraying operator exactly knows which field(s) to spray.
- It is important to obtain an assurance from the aerial spraying operator that all above requirements will be met and that all relevant data will be recorded in a spray log and be available for future reference.

**Application parameters:**

- **Volume**: A spray mixture volume of 30 ℓ/ha is recommended. As **DIMILIN® SC 48** has not been evaluated at a reduced volume, the registration holder cannot guarantee efficiency or accepts responsibility for any adverse effects if this product is applied aerially at a lower volume than recommended above.
- **Droplet coverage**: A droplet density of 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 microns is recommended. Ensure that the production of droplets smaller than 200 microns (high drift/evaporation potential) is restricted to a minimum.

**Spray Programme:**

**Potatoes**

The application timing of **DIMILIN® SC 48** should be part of a total spray programme to control **potato tuber moth**. Such a programme should consist of 3 application timings:

a) Applications of non-CDI products during the period from first moth infestation until first flowering.

b) Applications of **DIMILIN® SC 48** (for residual action) during the period from first flowering until foliage desiccation/destruction.
c) Application of insecticides to control moths in soil cracks during the period from desiccation to harvest.

d) The total number of sprays will depend on the severity of re-infestation.

**Do not exceed a total of 4 sprays in a growth season.**
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<th>PEST</th>
<th>DOSAGE</th>
<th>REMARKS</th>
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<tr>
<td>Potatoes</td>
<td>Potato tuber moth larvae (Phthorimaea opercula)</td>
<td>300 mℓ / ha</td>
<td><strong>First application:</strong> just before first flowering.</td>
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<td><strong>Second application:</strong> just after first flowering.</td>
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<td><strong>Third application:</strong> 14 days after the second application.</td>
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<td>Use in not less than 600 ℓ water per hectare.</td>
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<td>If infestations are high, a 4th application can be made 14 days later.</td>
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<td>Aerial application: Apply as above in 30ℓ water/ha.</td>
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<td>See Application Instructions for further details.</td>
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<td>Ridge at least twice per season.</td>
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<td>Fall Armyworm (Spodoptera frugiperda) (Emergency Registration)</td>
<td>208 mℓ / ha DIMILIN® SC 48 &amp; 250 g Emma / ha &amp; 100 mℓ Silhouette / ha</td>
<td><strong>Application timing</strong> It is recommended to scout at regular intervals. When larvae are first noticed on the foliage commence first application. It is recommended to commence application when larvae are on average 2 to 10mm and smaller. Apply first application and then continue to scout. Follow up with a second application 7 to 14 days later if required. Do not exceed 2 applications. Apply up to 600 L water / ha to ensure proper coverage of the full plant.</td>
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| Maize & sweet corn   | Fall Armyworm (Emergency Registration) | 208 mℓ / ha DIMILIN® SC 48 & 300 g Emma / ha & 100 mℓ Silhouette / ha | It is recommended to scout at regular intervals. When larvae are first noticed on foliage commence first application. Apply at the early instar development stage, (larvae should not be larger than 10mm). Apply first application and then continue to scout. Follow up with a second application 10 to
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<th>14 days later if required. Apply 200 - 400 L water/ha to ensure proper coverage of full plant</th>
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<td><strong>Do not exceed a total of 2 sprays per growth season.</strong></td>
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<td><strong>Emergency registration:</strong> Products approved for emergency registration are still undergoing evaluation for efficacy, selectivity and residues. Please note that human and environmental safety have already been approved.</td>
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