

# DELIVER

Reg. No. L11336 Act No. 36 of 1947

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

DELIVER is a water Dispersible granule formulation biological stomach action insecticide for the suppression of various Lepidoptera larvae as indicated.

**INSECTICIDE GROUP CODE 11A**



**DANGER**

## ACTIVE INGREDIENT

*Bacillus thuringiensis*, subspecies *kurstaki* strain SA-12 solids, spores and lepidopteran active toxins  
Concentration 90, 000 IU/mg

Contents

**1 KG**

**Emergency contact details**  
Office Hour Poisoning Helpline  
Rolfes Agri (Pty) Ltd  
Tel: +27 (12) 803 0145

**Manufactured by:** CERTIS U.S.A. L.L.C.  
9145 Guilford Road, Suite 175 • Columbia, Maryland 21046, USA  
Tel: +01 (800) 255-3924  
[www.certisbio.com](http://www.certisbio.com)  
Item: 110435-SAF Package: 590000 Rev-A

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**Rolfes**   
**Agri**

**Spill Response and Transport incidents**  
Spill Tech, Oil and chemical pollution control  
Tel: +27 (86) 100 0366 / +27 (83) 253 6618  
[www.spilltech.co.za](http://www.spilltech.co.za)



Store at room temperature • Keep out of direct sunlight  
• Keep container closed when not in use



## WARNINGS:

- Btk particles are sensitive to UV and prolonged exposure can result in reduced efficacy.
- Do **NOT** leave the product or mixture standing in the sun.
- **DELIVER** will remain viable for at least 24 months stored at room temperature.

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, quality of dilution water, compatibility with other substances not indicated on the label and the occurrence of resistance of the disease against 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, 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:

- If medical advice is needed, have product container or label at hand.
- Keep out of reach of children.
- Read carefully and follow all instructions.
- Avoid breathing dust/fumes/gas/mist/vapours/spray.
- Contaminated work clothing should not be allowed out of the work place.
- Wash hands and affected area thoroughly after handling. Do not touch eyes.
- Wear protective gloves protective clothing/eye protection.
- In the case of inadequate ventilation, wear respiratory protection.
- IF ON SKIN: Wash with plenty of water.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Specific treatment (see first aid treatment on this label).
- If skin irritation or a rash occurs: Get medical help.
- If experiencing respiratory symptoms: Get emergency medical help immediately.
- Take off contaminated clothing and wash it before reuse.
- Empty all pesticides from the container by placing it upside down over the spray tank and holding it there for at least 30 seconds. Puncture the rinsed container to render it useless and send to a recycler.
- Store in original container in a cool dry area, away from heat and direct sunlight. Store away from food and feed stuffs.
- **DELIVER** will not harm any beneficial organisms

## FIRST AID:

**Eye Contact:** If in eyes: Rinse cautiously with large amount of flowing cold water for at least 15 - 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing, if eye irritation persists: get medical advice / attention.

**Skin Contact:** On skin: Wash with plenty of water and non-abrasive soap. If skin irritation or rash occurs, get medical advice/attention.

**Inhalation:** If inhaled: If breathing is difficult, remove victim to fresh air and keep at rest in position comfortable for breathing. If signs/symptoms persist, get medical advice/attention.

**Ingestion:** If swallowed: Call a Poison Centre or doctor/physician if you feel unwell. Do **NOT** induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

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

## COMPATIBILITY:

- **DELIVER** contains Btk particles that is compatible with most agricultural chemicals. It is,

however, advisable to do a miscibility test prior to mixing with other chemicals. Consult with your chemical distributor, consultant or registration holder (Rolfes Agri) if uncertain.

- Additional adjuvants, spreaders, or stickers may be added to improve product performance, especially under heavy dew or rainy conditions.
- Combinations with commonly used insecticides, fungicides or other spray tank adjuvants are generally not deleterious to **DELIVER** if the mixture is used promptly after mixing, and use spray mixture with 12 hours.

- **DELIVER** is not compatible with alkaline materials (spray mixture pH > 10.5), Use a buffer to lower the pH of the water to 7.

## IMPORTANT NOTES:

- **DELIVER** can be applied as a ground, foliar or air application in water sufficient to ensure thorough and even coverage.
- Thorough and uniform crop coverage is required for adequate insect control.
- **DELIVER** does not impose any risk of residues on harvested crops.

## RESISTANCE WARNING

**DELIVER** contains *Bacillus thuringiensis, subspecies kurstaki* and is an IRAC\* GROUP 11A insecticide. Do not exclusively use **DELIVER** or other GROUP 11A insecticides to control the same pest throughout the season. Avoid exposing consecutive generations of a pest to the same mode of action by using the "application window" approach which rotates products from different mode of action groups.

An "application window" is the period of residual activity that a single application or sequential applications of products from the same mode of action provide. It can also be defined as the duration of an insect generation or if unknown, then use an approximate 30 day period. Rotate windows with treatments of **DELIVER** and other GROUP 11A products followed by windows of treatments with other effective products with different modes of action. Multiple applications (recommend no more than two) of the same MoA insecticide are acceptable if they are used within the same application window.

## MIXING INSTRUCTIONS:

- Fill spray tank with half the required water volume. Turn on and maintain agitation when adding the correct amount of **DELIVER** at the recommended dosage rate to the spray water. Agitate as necessary to maintain suspension. Add wetter/sticker while mixing and fill spray tank with water to the required volume.
- Use application rate amount of **DELIVER** in water sufficient to insure thorough coverage depending on type of crop, application equipment.

## APPLICATION TECHNIQUES

### Equipment and Spray Volume:

Ensure that the equipment is properly calibrated to give even distribution at the correct volume.

- Tractor sprayers with booms and nozzles: Use hollow cone or flat fan nozzles with a pressure setting of 3 to 4 bar and volumes of 300 to 1500 litres water per hectare.
- Tractorized mistblowers: Use hollow cone nozzles and a pressure setting of 5 to 10 bar. For trellised crops use 150 to 1500 litres water per hectare. The concentration of the spray mixture must be increased in accordance with the decrease in spray volume.
- Knapsack sprayers: Use hollow cone nozzles and a pressure setting of 1 to 2 bar. Always spray downward moving the spray lance in large circles at a spray volume of 300 to 800 litres water per hectare.
- Motorized knapsack sprayers: Always run engine at full speed for best droplet formation. Keep a steady walking speed. Use at least 100 litres water per hectare. The concentration of the spray mixture must be increased in accordance with the decrease in spray volume.
- Handgun spraying: Apply 300 to 1000 litres water per hectare according to foliage density.
- For trellised tomatoes, use vertical booms to improve treatment on both sides of the row. Wet the entire plant thoroughly. Avoid excessive run-off.

CROP/PEST	DOSAGE RATE	REMARKS
<b>Tomatoes</b> Tomato Leafminer larvae <i>(Tuta absoluta)</i>  <b>Semi- Looper</b> <i>(Plusia spp.)</i>  <b>African Bollworm larvae</b> <i>(Helicoverpa armigera)</i>	3.5 – 7 g/100 ℓ water + <b>AQUA-WET</b> 18 – 36mℓ/100 ℓ water  250 g – 500 g/ha  67.5 g/100 ℓ water (1000 g/ha)	Apply as necessary when larvae are noted. Follow up applications at 7 – 10 day intervals. Use higher dosage rate with higher infestation.  Apply as a full cover spray when pest occurs. Ensure thorough coverage of plants. With increased pest pressure use the higher rate.  Apply as a full cover spray when pest occurs. Ensure thorough coverage of plants. Apply as soon as the pest is noticed. Thorough coverage of the plants is essential. Repeat every 7 days. Will also suppress Semi-(Plusia) looper
<b>Berries</b> (Blueberries, blackberries, cranberries, dewberries (including boysenberry and loganberries) gooseberries, raspberries, blackcurrants and currant).  <b>African Bollworm larvae</b> <i>(Helicoverpa armigera)</i>  <b>Leafroller</b>  <b>Semi-Looper</b> <i>(Plusia spp.)</i>	500 g/ha	Apply as a full cover spray when pest occurs. Ensure thorough coverage of plants.
<b>Soybean</b> (including Peas, Beans, Chickpea, Lentils, Lupin)  <b>African Bollworm larvae</b> <i>(Helicoverpa armigera)</i>  <b>Semi-Looper</b> <i>(Plusia spp.)</i>  <b>Fall Armyworm</b> <i>(Spodoptera frugiperda)</i>	500 g/ha  375 – 500 g/ha  1 kg/ha	Apply as a full cover spray when pest occurs. Ensure thorough coverage of plants.  Apply as a full cover spray when pest occurs. Ensure thorough coverage of plants. With increased pest pressure use the higher rate.  1st application with first detection of specified pest eggs. 2nd application 7 – 10 days after first application. Continue applications of <b>DELIVER</b> every 7 to 10 days as long as specified pest is present.

#### REMARKS

- Treat when small, newly-hatched larvae are present and the first feeding damage is observed.
- Since **DELIVER** must be ingested to obtain control, treat when larvae are actively feeding and before extensive damage occurs.
- Thorough spray coverage is essential for good control of the pest. Nozzles on ground application equipment should be arranged in such a way, as to provide the best coverage. Increased water volume and spray pressure, will improve coverage.
- To maintain control, applications may be repeated if necessary at 3 to 7 day intervals, depending on the rate of growth of the crop, weather conditions and severity of insect infestation.
- If insect infestation becomes high, increased water volume and shortened spray intervals may be necessary to achieve acceptable control.
- **DO NOT** exceed 4 successive applications.

**Aqua-Wet** is registered product of Rolfes Agri (Pty) Ltd. L6204, Alcohol ethoxylate, glycol ether, Fatty acids, 900 g/ℓ