

[Sales Panel]

For further information see attached pamphlet
Vir verdere inligting sien aangehegte pamflet

BOLT™ 240 SC

Reg. No. / Nr. L11215, Act No. / Wet Nr. 36 of/ van 1947

READ THE LABEL BEFORE USE

KEEP OUT OF REACH OF CHILDREN AND ANIMALS

A suspension concentrate selective contact and stomach insecticide as a molting acceleration product for the control of insect pests on crops as listed.

'n Suspensie konsentraat selektiewe kontak- en maaginsekdoder wat vervelling in insekte versnel vir die beheer van insekplae in gewasse soos aangedui.

GROUP/GROEP

18

INSECTICIDE / INSEKDODER

ACTIVE INGREDIENT:

AKTIEWE BESTANDDEEL:

Methoxyfenozide (diacylhydrazine).....240 g/l..... Metoksiefenosied (diasielhidrasien)

Netto volume

ℓ

Net volume



DANGER

GHS Hazard Statements

Harmful if inhaled
Causes mild skin irritation
Causes serious eye damage.
Suspected of damaging fertility or the unborn child.
Toxic to aquatic life.
Harmful to aquatic life with long lasting effects.

GHS Precautionary Statements

Avoid release to the environment.
Use only outdoors or in a well-ventilated area.



REGISTRATION HOLDER / REGISTRASIEHOUER:

AECI® Limited / AECI® Beperk

Reg. No. / Nr. 1924/002590/06

P.O. Box / Posbus 14418

Witfield, 1467

Tel : (011) 823 8000

www.aeciph.com/www.aeciworld.com

BOLT™ is a pending trademark of AECI® Limited / is 'n hangende handelsmerk van AECI® Beperk

IN CASE OF POISONING PLEASE PHONE / IN GEVAL VAN VERGIFTIGING SKAKEL 0861555777 / 082 446 8946

Batch No:

Lotnommer:

Date of manufacture:

Datum van vervaardiging:

UN No. / VN Nr. Not Regulated

Pamphlet

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- Handle product with care.
- Relatively harmless to bees and young bees.
- Relatively harmless to parasitoids, predatory insects and predatory mites.
- Store under lock and key in a cool, dry place, away from food, feeds, seed and fertilizers.
- Keep out of reach of children, uninformed persons and animals.
- **Re-entry:** Do not enter treated area until spray deposit has dried unless wearing protective clothing. In case of poisoning – CALL A DOCTOR AND MAKE THIS LABEL AVAILABLE TO HIM/HER.

WITHHOLDING PERIODS:

IN CASE OF CROPS GROWN FOR LOCAL CONSUMPTION ALLOW THE FOLLOWING NUMBER OF DAYS BETWEEN THE LAST APPLICATION AND HARVESTING OR GRAZING.

Apples & Pears	10 DAYS
Apples (when mixed with Eamectin Benzoate 20% WG)	28 DAYS
Avocados	30 DAYS
Citrus	30 DAYS
Lettuce	14 DAYS
Litchis	30 DAYS
Spinach	14 DAYS
Tree Nuts (Almonds, Cashews, Chestnuts, Hazelnuts, Macadamia nuts, Pecans, Pistachio nuts, Walnuts, Coconut, Brazil nuts and Pine nuts)	14 DAYS

NOTE: Compliance with these withholding periods will ensure that residues do not exceed local Maximum Residue Limits (MRL's), but the import tolerances of other countries might possibly be exceeded. If the crop to be treated is intended for export, consult the relevant importer or exporting body regarding the use of this product, Maximum Residue Limits and recommended withholding periods

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 PESTS AGAINST THE REMEDY CONCERNED, AS WELL AS THE METHOD, TIME AND ACCURACY OF APPLICATION. THE REGISTRATION HOLDER FURTHER MORE 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:

GHS Precautionary Statements

Obtain, read and follow all safety instructions before use.

Avoid breathing dust/fume/gas/mist/ vapours/spray.

Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

Wash hands thoroughly after handling.

Do not touch eyes.

Use only outdoors or in a well-ventilated area.

Avoid release to the environment.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If skin irritation occurs: Get medical help.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

IF exposed or concerned, get medical advice.

Avoid eye and skin contact.

Wash with soap and water after use and after accidental skin contact.

Wash contaminated clothing after use.

Do not eat, drink or smoke whilst mixing or applying the product or before washing hands and face and changing clothes. If in contact with skin, wash immediately with cold water and soap.

Avoid excessive drift - do not treat if wind velocity exceeds 2 meters per second (7 km per hour)

Prevent contamination of food and feed, drinking water and eating utensils.

Prevent spray drift onto other crops, grazing, rivers, dams or areas not under treatment.

Clean applicator thoroughly after use and dispose of wash water where it will not contaminate crops, grazing, rivers or dams.

Triple rinse the empty container: Invert the empty container over the spray or mixing tank and drain for at least 30 seconds after the flow has slowed down to dripping. Thereafter rinse the empty container three times in succession with one quarter of the container volume fresh water and decant the rinsate into the spray or mixing tank. Puncture the triple rinsed container and dispose of via an approved collector or recycler (www.croplife.co.za). Do not bury, burn or donate the container to any other parties that may use it as a container for food or beverages.

RELEVANT SUBSTANCES:

Substance name (IUPAC)	CAS –No.	Concentration % By weight
	EC-No.	
Methoxyfenozide	605-245-2	20-24%
	161050-58-4	
Others to 100%		

NOTE: The other ingredients not included above, do not cause or contribute towards the correct GHS classification of **BOLT 240 SC** and are therefore, in terms of the South African Regulations for Hazardous Chemical Agents - 2021; Regulation 14(b), not listed.

FIRST AID MEASURES:

NOTE TO PHYSICIAN: If poisoning occurs, immediately contact a doctor, and follow the advice given. Show this Material Safety Data Sheet to a doctor.

In case of inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a poison control centre or doctor for treatment advice.

In case of skin contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation occurs.

In case of eye contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. If effects occur, consult a physician, preferably an ophthalmologist.

In case of ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if you feel unwell.

NOTE TO PHYSICIAN:

Treat symptomatically.

RESISTANCE WARNING:

BOLT 240 SC is a Group Code 18 insecticide. Any insect population may contain individuals naturally resistant to **BOLT 240 SC** and other Group Code 18 insecticides. The resistant individuals can eventually dominate the insect population if these insecticides are used repeatedly and exclusively in programs. These resistant insects may not be controlled by **BOLT 240 SC** or any other Group Code 18 insecticide.

Local experts should be consulted for resistance strategies and specific recommendations. It is recognised that resistance of insects and mites to insecticides and acaricides can also result from enhanced metabolism, reduced penetration or behavioural changes that are not linked to **Bolt 240 SC** any site of action classification but are specific for individual chemicals or chemical groupings. Despite this, alteration of compounds from different chemical classes remains a viable anti-resistance management technique.

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 programs.
- For specific information on resistance management contact the registration holder of this product.

Use of Bolt 240 SC in Integrated Pest Management (IPM) Control Program:

- **BOLT 240 SC** can be recommended for IPM programs, in apple, pear and citrus crops. **BOLT 240 SC** should be applied as a preventative spray when field scouting and/or monitoring indexes indicates that the target pest will reach economic thresholds. The best positioning of **BOLT 240 SC** applications are at the beginning of peak moth flight or before egg hatch where degree day models are followed (e.g. Codling moth) or before egg hatch of peak moth flights. This will ensure that the majority of eggs are laid on treated surfaces and emerging larvae are exposed to **BOLT 240 SC** before any damage is caused.
- **A maximum of 2 sprays per season** are allowed for control of Codling moth and False codling moth in pome and citrus fruit.
- **BOLT 240 SC** is a selective insecticide and only controls the larval stage of insects of the *Lepidoptera* group. **BOLT 240 SC** used under GAP, does not have a significant impact on certain parasitic or predaceous insects and mites, including ladybirds, lacewings, assassin bugs, predatory mites, etc.
- If **BOLT 240 SC** is tank mixed with any insecticide that reduces its selectivity in preserving beneficial predatory insects, then the full benefit of **BOLT 240 SC** to the IPM program may be reduced.

MODE OF ACTION:

- **BOLT 240 SC** is a molting acceleration product and is most effective. After being ingested by young larvae, it also has good ovicidal effect, but minimal contact effect on older larvae. The active ingredient methoxyfenozide, mimics the action of the molting hormone of *lepidopterous* larvae (L1-L2 stages), and differs from other insect growth regulators like chitin-biosynthesis- inhibitors or juvenile-hormone mimic products. Upon ingestion, larval stages of the order *Lepidoptera* undergo an incomplete and developmentally lethal premature molt. After ingestion larvae cease feeding within 4-8 hours. The larvae die on account of their inability to feed and complete the molting process.
- This mode of action therefore requires thorough spray coverage of the plant surface with **BOLT 240 SC**
- pH: **BOLT 240 SC** is stable in a water suspension with a pH of 4-9.

DIRECTIONS FOR USE: USE ONLY AS DIRECTED

COMPATIBILITY:

The compatibility of **BOLT 240 SC** has not yet been proven with agricultural remedies. Its compatibility with other products may be influenced by several factors. As certain factors may vary from farm to farm, a physical compatibility test must always be performed before such a tank mixture is sprayed. For more information on compatibility or in the event of uncertainty, contact your local AECI Crop Adviser. It is recommended to do a compatibility test on a small area and observe the treated area for 3 days before doing commercial applications.

MIXING INSTRUCTIONS:

- Fill the spray tank with water to about half of the total spray volume required. Start agitation and add the required amount of **BOLT 240 SC** to the spray tank. Continue mixing and agitation while filling the spray tank to the required spray volume. Maintain sufficient agitation during application to ensure uniformity of the spray mix. Do not allow water or spray mixture to back-siphon into the water source.
- Tank mixing: **BOLT 240 SC** is compatible with fungicides and insecticides normally used on apples, pears, citrus and other crops.
- Before tank mixing **BOLT 240 SC** with other products, a compatibility test (jar test) using relative proportions of tank mix products should be conducted prior to mixing in the spray tank.
- If foliar fertilisers are used, the compatibility test should be repeated with each batch of fertiliser utilising the mixing water source.
- Vigorous, continuous agitation during mixing, filling and throughout application is required for all tank mixes. Back flow sparger pipe agitators, at the bottom of the spray tank, generally provide the most effective agitation in spray tanks. To prevent foaming in the spray tank, avoid mixing air into the spray mixture.

Mixing Sequence for Tank Mixes:

Fill the spray tank with water to approximately one quarter of the total spray volume required. Start agitation. Add different formulation types in the order indicated below, allowing time for complete mixing and dispersion after addition of each product. Allow extra mixing and dispersion time for Dispersible granule flowable (WG) products.

Add different formulation types in the following order:

1. Water dispersible granules. (After pre-mixing with water)
2. Wettable powders. (After pre-mixing with water)
3. **BOLT 240 SC** and other aqueous suspensions.
Maintain agitation and fill spray tank to three-quarters of total spray volume.
Then add:
4. Emulsifiable concentrates.
5. Foliar Fertilizers.
6. Continue filling the spray tank to the required volume while maintaining continuous agitation during mixing, final filling and throughout application. If spraying and agitation must be stopped before the spray tank is empty, settled materials must be re-suspended before spraying is resumed. A back flow sparger agitator at the bottom of the tank is particularly useful for this purpose.

Premixing:

Dispersible granule (WG) and Wettable Powder (WP) formulations may be pre-mixed with water (slurried) and added to the spray tank through a 20 - 35 mesh screen. This procedure assures good initial dispersion of these formulation types.

APPLICATION

Proper application techniques help ensure thorough spray coverage and the correct dosage necessary to obtain optimum control of insect pests. The following recommendations are provided for effective application of **BOLT 240 SC**. To ensure adequate spray coverage, attention should be given to ground speed and calibration, wind speed, and foliar canopy.

Application for Fruit tree crops:

Use conventional orchard spray equipment correctly calibrated to provide thorough coverage of the target crop and correct rate per ha.

Addition of adjuvants:

If the surface of the fruit to be treated is waxy or difficult to wet, the use of a registered adjuvant at the registered rate is recommended.

BOLT 240 SC should be sprayed as a high volume (HV) application. On Pome fruit rate per ha should preferably be calculated according to the formula for HVR, using "Unrath's Formula" for "Tree Row Volume" (TRV).

$$\frac{TRV \times 937}{\text{Distance between Rows (RW)}} = \frac{\text{Tree High (TH)} \times \text{Tree Width (TW)} \times 937}{\text{Distance between Rows (RW)}} = \text{HVR in liters per ha}$$

*(Tree height and tree width should be measured during summer when trees are in full flush)

Directions for Application Volumes (AV) at different growth stages and the calculation of rate per ha, based on High Volume Requirements (HVR).

Growth Stage	% OF THE HIGH VOLUME WATER REQUIREMENT/Ha
Bud Break to Full Blossom	60 %
75 % Petal Fall to One Month Later (Mid Season)	80 %
Mid Season to Post Harvest, Before Leaf Drop	100 %

$$\text{Rate per ha} = \frac{\text{HVR in L per ha} \times \text{rate per 100L}}{100}$$

Application Table:

<u>CROP & PEST</u>	<u>Dosage</u> (per 100 ℓ water)	<u>Remarks</u>
<u>APPLES & PEARS</u> Codling moth (<i>Cydia pomonella</i>)	60 ml BOLT 240 SC OR 60 ml BOLT 240 SC /100 ℓ PLUS 5 g Emamectin Benzoate 20% WG	Apply BOLT 240 SC as a high volume, full cover application. Thorough coverage is essential. Start applications of BOLT 240 SC at the beginning of a moth generation, or in the case of the first generation, at ¼ % petal fall and repeat at 14 day intervals for a maximum of 2 consecutive applications. To comply with resistance management strategies, BOLT 240 SC should not be used in total more than two (2) times per season on any Apple or Pear orchard. Other registered insecticides with a different mode of action should be used for the treatment of the remainder of the spray program.
Important note: If BOLT 240 SC is applied for the control of the last generation of the season, then a product with a different mode of action must be used for control of the first generation in the following season. Although BOLT 240 SC can be used on any generation of Codling moth, the positioning of BOLT 240 SC will be determined by the specific control strategy that is followed. Although not necessarily, as a general guide BOLT 240 SC may be considered for use in the 2 nd generation.		
<u>CITRUS</u> <u>AVOCADOS</u> <u>LITCHIS</u> <u>TREE NUTS</u> (Almonds, Cashews, Chestnuts, Hazelnuts, Macadamia nuts, Pecans, Pistachio nuts, Walnuts, Coconut, Brazil nuts and Pine nuts) False codling moth (<i>Thaumatotibia leucotreta</i>)	60 ml BOLT 240 SC	Apply BOLT 240 SC as a high volume application. Apply at 8 and 4 weeks prior to harvest or when infestations are expected to occur.
Resistance management: For control of False codling moth do not apply BOLT 240 SC in total more than two (2) times per season to any one block of crops. Alternate the use of BOLT 240 SC with registered insecticides with a different mode of action.		
<u>LETTUCE</u> <u>SPINACH</u> African Bollworm (<i>Helicoverpa armigera</i>)	60 ml / 100 ℓ water 300 to 600 ml/ha A registered wetter may be added if required.	Apply as soon as pest is noticed as a full cover application at 500 — 1 000 ℓ/ha spray mixture. Apply a follow-up application if necessary. NOTE: As a single corrective application against bollworm, BOLT 240 SC is more effective against early instar larvae. Resistance management: For resistance management, BOLT 240 SC should not be applied in total more than three (3) times per season to any block of Spinach.