Plant Growth Regulator



MINIKIN 250 EC

Reg. No. L 11277 Act 36 of 1947

3: 17/11/2022 - Feb2023

An emulsifiable concentrate, plant growth regulator for the reduction of plant height in small grain and sugarcane.

ACTIVE INGREDIENT

trinexapac-ethyl

250 g/e



Hazard Statements:

May be fatal if swallowed and enters airways.
May cause allergic reactions.

Cause serious eye damage. Harmful if inhaled.

May cause damage to organs (gastrointestinal tract) through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

IF SWALLOWED: Get emergency medical help immediately.

IF ON SKIN: Wash with plenty of water and non-abrasive soap.

Wear protective gloves/protective clothing. Wash hands thoroughly after handling. Do not touch eyes. IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Do not breathe dust, fume, gas, mist, vapours and spray.

Dispose of content/container to suitable landfill in accordance with local regulations.



Registration holder: UNIVERSAL CROP PROTECTION (PTY) LTD. Co. Reg. No. 1983/008184/07 PO Box 801, Kempton Park, 1620 Tel. (011) 396 2233

Website: www.villacrop.co.za 24 HR EMERGENCY NUMBERS:

Griffon Poison Centre: +27 82 446 8946 24 HR Transport / Spill Emergency no: (Hazcall24) +27 86 044 4411 (Client: Villa Crop Protection)

MINIKIN 250 EC

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WARNINGS

| Allow the following number of days between the last application and harvest or grazing of the crops listed below: | | | | |
|---|---------|--|--|--|
| Small grain (Wheat and Barley) (Grazing) | 42 days | | | |
| Sugarcane | 70 days | | | |

NOTE

THE MAXIMUM RESIDUE (MRL'S) LEVELS WILL NOT BE EXCEEDED, PROVIDED APPLICATIONS ARE APPLIED AS HEREWITH PRESCRIBED. WHEN PRODUCTION IS DESTINED FOR THE EXPORT MARKET, THE EXPORT AGENCY OF CONCERN MUST BE CONTACTED, PRIOR TO THE USE OF MINIKIN 250 EC IN A SPRAY PROGRAMME.

Hazard statements

May be fatal if swallowed and enters airways.

May cause allergic reactions.

Cause serious eye damage.

Harmful if inhaled.

May cause damage to organs (gastrointestinal tract) through prolonged or repeated exposure.

Very toxic to aquatic life with long lasting effects.

- May be harmful if absorbed through the skin.
- Store under lock and key in a cool place, away from food, feeds, seed, fertilizers and other agricultural remedies.
- Keep out of reach of children, uninformed persons and animals.
- Re-entry: Do not enter treated area within one (1) day after application unless wearing protective clothing.
- In case of poisoning call a doctor and make this label available to him/her.

Aerial application:

Notify all inhabitants in the immediate vicinity of the lands to be sprayed and issue the necessary warnings. Do not spray over or allow 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 soil, 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 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

Precautionary statements:

IF SWALLOWED: Get emergency medical help immediately.

Do NOT induce vomiting.

Store locked up.

Dispose of content/container to suitable landfill in accordance with local regulations.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/protective clothing.

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IF ON SKIN: Wash with plenty of water and non-abrasive soap.

Wash hands thoroughly after handling. Do not touch eyes.

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

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

Do not breathe dust, fume, gas, mist, vapours and spray.

Get medical help if you feel unwell.

Collect spillage.

- Use only outdoors or in a well-ventilated area.
- Do not eat, drink or smoke whilst mixing or applying the product or before washing hands and face or change of clothing.
- Prevent drift onto other crops, grazing, rivers, dams or areas not under treatment.
- Clean the applicator after use and dispose of wash water where it will not contaminate food, grazing, rivers or dams.
- TRIPLE RINSE empty containers by inverting 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). Where possible, recycling is preferred to disposal or incineration. If recycling is not
 practicable, dispose of in compliance with local regulations. Observe all labelled safeguards until container is
 destroyed.
- Never re-use the empty container for any other purpose.
- Prevent contamination of food, feeds, drinking water and eating utensils.

| Relevant hazardous compounds | |
|--|----------|
| Trinexapac ethyl | 250 g/ℓ |
| Poly(oxy-1,2-ethenediyl)α-isotridecyl-ω-hydroxy- | <300 g/ℓ |
| Solvent Oil | <500 g/ℓ |

FIRST AID TREATMENT

- <u>Inhalation:</u> Remove person from contaminated area to fresh air and assist breathing as needed. Seek medical attention if irritation occurs. Keep patient warm and at rest. **Seek medical attention if you feel unwell after inhalation.**
- <u>Skin:</u> Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. Obtain medical attention if irritation persists.
- <u>Eyes:</u> Flush eyes with clean water for at least 15 to 20 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing.
- <u>Ingestion:</u> Seek medical attention or call a poison control centre for treatment advice. Do not induce vomiting unless instructed to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person. If the person is alert, rinse mouth thoroughly with water. Do not induce vomiting.

USE RESTRICTIONS

- MINIKIN 250 EC is a plant growth regulator used for the reduction of lodging in small grain. In sugarcane MINIKIN 250 EC shortens the internodes and increase sugar content.
- Optimum results will be achieved on vigorous, healthy plants when sprayed under good absorption conditions.
- DO NOT apply MINIKIN 250 EC to plants under stress due to drought or flooding conditions, nutrient
 deficiencies, high insect infestation, high disease pressure, nematode damage, herbicide damage and
 frost conditions.

DIRECTIONS FOR USE: Use only as directed.

General information:

SMALL GRAIN

- MINIKIN 250 EC is a plant growth regulator (PGR) that inhibits the production of gibberellic acid.
- It is absorbed by the foliage and translocated to the growth points.

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- The application of MINIKIN 250 EC reduces internode length which results in a reduction of lodging.
 MINIKIN 250 EC has no soil or root activity therefore good coverage is essential for effective uptake of the product by the foliage of the crop.
- Both small grain and canola crops can be planted in soil treated with MINIKIN 250 EC in the event of crop failure.
- Ensure that the conditions are conducive to a high photosynthetic rate. Failure to do so may lead to less
 desirable results.
- Ensure that the crops have a good soil water supply, adequate nutrients and are that the crops are in good health.

SUGARCANE

- In sugarcane, MINIKIN 250 EC acts as a ripening agent, which results in improved sucrose quality and content. This occurs because there is a reduction in the development of new leaf and stalk tissue. Treated sugarcane is also shorter and sturdier which results in a more streamlined planting process and seed piece production.
- MINIKIN 250 EC has no soil or root activity therefore good coverage is essential for effective uptake of the product by foliage of crop.
- DO NOT apply MINIKIN 250 EC to ripen sugarcane during the months of JUNE to SEPTEMBER.
- MINIKIN 250 EC has no effect on the apical meristem, thus sugarcane that has been treated with
 MINIKIN 250 EC will eventually outgrow its effects and proceed to grow normally. If harvesting is
 disrupted or when carry-over of cane to following season occurs, this trait decreases the risk of any
 adverse effect at harvest.
- Ensure that the conditions are conducive to a high photosynthetic rate, which can be expressed by at least eight (8) green leaves together with long upper internodes being present at, as well as after a **MINIKIN 250 EC** application. Failure to do so may lead to less desirable results.
- Ensure that the crops have a good soil water supply, adequate nutrients and that the crops are in good health after a **MINIKIN 250 EC** application for optimal results.

Compatibility:

- Do not apply MINIKIN 250 EC with other products/pesticides not listed on the label.
- INTERLOCK® (L 10254 / W 130875 / N-AR 1856) can be added to improve drift control, canopy penetration and coverage.

Application Instructions:

- MINIKIN 250 EC is rain fast two (2) hours after application.
- Prevent drift onto adjacent crops, plants or grazing as this may cause serious 'off-target' damage. Use a suitable drift retardant adjuvant such as **Interlock**® for ground and aerial application.
- Take care to avoid overlapping of spray swaths.

Mixing Instructions:

- Half fill the spray tank with clean water.
- If other products will be tank mixed with **MINIKIN 250 EC**, the following mixing sequence, as applicable, must be used: buffer/acidifier; wettable powder or granules; suspension concentrate; emulsifiable concentrate; wetter. Thereafter fill the tank to the required volume with clean water while maintaining agitation, to ensure thorough mixing of the spray mixture, before application commences.
- Ensure continuous agitation during mixing and application.
- The spray mixture must be sprayed immediately after mixing. Prepared spray mixture must not be left in the spray tank for any length of time e.g., overnight.

Ground application:

• Apply by means of a calibrated tractor-mounted boom sprayer or knapsack sprayer, in good working order equipped with flat fan nozzles, which delivers at least 200 to 400 litres spray mixture per hectare.

Aerial Application:

Aerial application of **MINIKIN 250 EC** 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:

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- <u>Volume</u>: A minimum spray mixture volume of at least 30 to 50 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: 35 to 45 droplets per cm² must be recovered at the target area.
- <u>Droplet size</u>: A droplet spectrum with a VMD of 300 to 350 micron is recommended. Limit the production of fine droplets less than 150 micron (high drift and evaporation potential) to a minimum.
- <u>Flying height</u>: Maintain the height of the spray boom at 3 to 4 metres above the target. Do not spray when aircraft dives, is in a climb or when banking.
- Use suitable <u>atomizing equipment</u> 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 atomizers within the inner 60 to 75 % of the wingspan to prevent droplets from entering the wingtip vortices.
- The difference in <u>temperature</u> 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 <u>inversion conditions</u> (spraying in or above the inversion layer) and/or <u>high humidity conditions</u> (relative humidity 80 % and above) may lead to the following:
 - reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage),
 - 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.

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APPLICATION DOSAGE RATES

IMPORTANT

Refer to "Application Instructions" above.

| Wheat and Barley* Cound application: Apply in 200 to 400 litres water per hectare. | Crop | Growth Regulating Activity | Dosage Rate | Remarks |
|---|------------------------------------|--|---|--|
| Reduction in lodging by reducing internode length. This results in shorter plants with less biomass. Reduction in shorter plants with less biomass. Deer hectare. Aerial application: Apply in 30 to 50 litres water per hectare. Apply higher rates when crop canopy is dense. The application of MINIKIN 250 EC may delay crop development by 7 to 10 days at anthesis. This will not affect the total number of days until the crop reaches maturity. Actively growing crops may be able to compensate for growth retardation. In this case, a second application can be made between the BBCH 37 to 39 growth stage. Applications should be made on actively growing crops NOT LATER THAN the BBCH 39 growth stage. Higher rates should be applied if plant populations, soil moisture and nutrition levels are favourable. Ground application: Apply in 200 to 400 litres water | Wheat and | | | |
| Reduction in lodging by reducing internode length. This results in shorter plants with less biomass. Actively growing crops may be able to compensate for growth retardation. In this case, a second application can be made between the BBCH 37 to 39 growth stage. Applications should be made on actively growing crops NOT LATER THAN the BBCH 39 growth stage. Higher rates should be applied if plant populations, soil moisture and nutrition levels are favourable. Ground application: Apply in 200 to 400 litres water | | | 0.4 ℓ / ha | per hectare. <u>Aerial application:</u> Apply in 30 to 50 litres water per hectare. Apply higher rates when crop canopy is |
| lodging by reducing internode length. This results in shorter plants with less biomass. 200 to 400 mt/ha Actively growing crops may be able to compensate for growth retardation. In this case, a second application can be made between the BBCH 37 to 39 growth stage. Applications should be made on actively growing crops NOT LATER THAN the BBCH 39 growth stage. Higher rates should be applied if plant populations, soil moisture and nutrition levels are favourable. Ground application: Apply in 200 to 400 litres water | Poduction in | | development by 7 to 10 days at anthesis. This will not affect the total number of days until the crop reaches maturity. | |
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| Ground application: Apply in 200 to 400 litres water | Adding a drift rotardant is advisa | | | |
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| development by 7 to 10 days at anthesis. This will | | | The application of MINIKIN 250 EC may delay crop development by 7 to 10 days at anthesis. This will not affect the total number of days until the crop reaches maturity. | |

^{*} MINIKIN 250 EC was tested on the variety Overture and Puma. However, other cultivars might show differences in ripening responses.

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| Crop | Growth Regulating Activity | Dosage Rate | Remarks |
|---|---|---|--|
| Sugarcane (Irrigated and rain fed sugarcane / ratoon and plant cane)* | Reduction in internode length and acceleration of sucrose production. Faster production and increased storage of sucrose in the sugarcane stalks | Applied as a single application 1 \(\ell \) ha Applied as a sequential application | To be applied as a single application, 49 to 70 days before harvest. Please note that varietal differences in ripening might be observed. Apply when at least eight green leaves present on the plants, soil moisture is sufficient to promote growth and the juice purity is ≤ 85 %. Do not apply from June to September. Cooler weather will lengthen the time between application and harvest. Ground application: Apply in 200 to 400 litres water per hectare. Aerial application: Apply in 30 to 50 litres water per hectare. Apply higher rates when crop canopy is dense. MINIKIN 250 EC must be applied 70 days (± 2 days) before harvest. FOLLOWED BY: Fluazifop-p-butyl applied at label registered rates four (4) weeks later (42 days before harvest). |
| Adding a drift re | etardant is advisal | 0.8 ℓ / ha | Ground application: Apply in 200 to 400 litres water per hectare. Aerial application: Apply in 30 to 50 litres water per hectare. Apply higher rates when crop canopy is dense. |

^{*} The ripening response was only tested on the N27 and N32 varieties. Other varieties might show differences in ripening responses.

Consult the relevant product/pesticide labels for WARNINGS, PRECAUTIONS and DIRECTIONS FOR USE.

INTERLOCK® is a registered trademark of WINFIELD SOLUTIONS REGISTRATION HOLDINGS (PTY) LTD.

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