

BEFORE USING THIS PRODUCT, READ THE LABEL CAREFULLY. KEEP OUT OF REACH OF CHILDREN AND ANIMALS.

## Plant Growth Regulator



# QUAT 50 SL

Reg. No. L 9452 Act No. 36 of 1947

3: 24/8/2022 - Nov2022

A water-soluble solution plant growth regulator for the modification of growth in cotton.

### ACTIVE INGREDIENT

mepiquat chloride 50 g/l



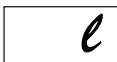
**DANGER**

#### Hazard Statements:

Causes skin irritation.  
Causes serious eye damage.

#### Precautionary Statements:

Wash hands thoroughly after handling. Do not touch eyes.  
Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.



**villa** 

**UN Number: Not Regulated**

Registration holder: VILLA CROP PROTECTION (PTY) LTD.  
Co. Reg. No. 1992/002474/07  
PO Box 10413, Aston Manor, 1630  
Tel. (011) 396 2233  
Website: [www.villacrop.co.za](http://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)

REFER TO DETAILS AS PRINTED ON CONTAINER / BAG

DIRECTIONS FOR USE ENCLOSED

Batch Number:

Date of Manufacture:

**QUAT 50 SL**

Reg. No. L 9452 Act No. 36 of 1947

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mepiquat chloride..... 50 g/l

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**VILLA CROP PROTECTION (PTY) LTD.**

Co. Reg. No. 1992/002474/07

PO Box 10413, KEMPTON PARK, 1620

Tel. (011) 396 2233

**WARNINGS****Withholding periods:**

<b>Minimum time between the last application and harvest or feeding:</b>
Do not apply within 30 days of harvest.
Do not graze or feed forage treated cotton to livestock within 30 days of application

**NOTE**

**ABOVE-MENTIONED WITHHOLDING PERIODS REFER TO COMPLIANCE WITH LOCAL MAXIMUM RESIDUE LIMITS (MRL'S). HOWEVER, IT IS IMPORTANT TO NOTE THAT IMPORT TOLERANCES OF OTHER COUNTRIES MIGHT POSSIBLY BE EXCEEDED. IF THE TREATED CROP WILL BE EXPORTED, FIRST CONSULT THE RELEVANT IMPORTER OR EXPORTING BODY REGARDING THE USE OF THIS PRODUCT, MRL'S AND RECOMMENDED WITHHOLDING PERIODS.**

**Hazard statements:**

Causes skin irritation.
Causes serious eye damage.

- Handle the product with care.
- Store in a cool, dry, well-ventilated place.
- Store 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 until spray deposit has dried unless wearing protective clothing.

**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 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:**

Wash hands thoroughly after handling. Do not touch eyes.
Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.
IF ON SKIN: Wash with plenty of water and non-abrasive soap.
IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Get medical help.
Refer to first aid treatment on this label for specific treatment.
If skin irritation occurs get medical help.
Take off contaminated clothing and wash it before reuse.

- Do not inhale the spray mist.
- Avoid contact with skin and eyes.
- Do not eat, drink or smoke whilst mixing or applying the product or before washing hands and face and change of clothing.

- Do not allow drift of spray onto other crops, grazing, rivers, dams or areas not under treatment.
- Clean the applicator and dipping bath after use and dispose of wash water where it will not contaminate food, grazing, boreholes, rivers or dams.
- **TRIPLE RINSE THE EMPTY CONTAINER AS FOLLOWS:** 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 (3) 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](http://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.
- Prevent contamination of food, feeds, drinking water and eating utensils.

<b>Relevant hazardous components</b>	
Mepiquat chloride	55 g/l
Tallow alkylamine ethoxylate	< 150 g/l

### **FIRST AID TREATMENT**

- **Skin:** Remove contaminated leather goods, clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. **Obtain medical attention if irritation or rash occurs.**
- **Eyes:** Flush eyes with clean water for at least 15 to 20 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after five (5) minutes and continue rinsing. **Seek medical attention.**
- **Inhalation:** Remove person from contaminated area to fresh air and assist breathing as needed. **Seek medical attention if you feel unwell after inhalation.**
- **Ingestion:** **Seek medical attention immediately** or call a poison control centre for treatment advice. **Do NOT induce vomiting due to the aromatic solvent.** Do not give anything by mouth to an unconscious person. If the person is alert, rinse mouth thoroughly with water.
- **Advice to physician:** Treat symptomatically and supportively. No specific antidote known.

### **USE RESTRICTIONS**

- Do not apply to cotton that experience stress conditions (e.g., drought, water logging, diseases, weed competition and insect- or hail damage), and which is expected to experience any stress shortly after application. This may lead to unsatisfactory results and / or delayed maturity.
- Do not apply at rates and/or times not specified below as this adversely affect yield and/or delay maturity.
- Do not apply if rainfall/overhead irrigation is expected within eight (8) hours after application, as this may reduce effectiveness.

### **MODE OF ACTION**

**QUAT 50 SL** is a systemic plant growth regulator, absorbed by foliage and translocated through the plant. The active ingredient **Mepiquat chloride** inhibits gibberellin biosynthesis.

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

#### **General information:**

- **QUAT 50 SL** regulates the growth pattern and behaviour of cotton plants such as: darker foliage colour, reduction of plant height and internodal length, more open canopy, better boll retention, earlier maturity.
- Some of these effects may:
  1. Favourably influence the yield potential of the crop.
  2. Increase the portion of mature seed cotton for the first picking.
  3. Facilitate easier harvesting.

#### **Compatibility:**

**QUAT 50 SL** is compatible with most insecticides and miticides and can be used in tank mixtures. If tank mixtures with other products are made, first confirm compatibility by mixing small volumes of the products in the correct ratio with the appropriate quantity of water.

Water quality and formulation properties of other products may influence compatibility.

#### **Mixing Instructions:**

- Half fill the spray tank or dipping bath with clean water.
- Add the required amount of **QUAT 50 SL** to the water while stirring.

- Fill the spray tank/dipping bath with water to the required level, while maintaining agitation, to ensure thorough mixing.
- Maintain agitation during application.

#### **Application instructions:**

##### **Ground application:**

- A minimum of 200 litres water per hectare should be used with ground equipment.
- Ensure that spray equipment is well calibrated and that only the prescribed amount of **QUAT 50 SL** per hectare is applied.
- All spray applications must be performed with suitable equipment that is in good working order and correctly calibrated to give the desired coverage for that particular method of application.

##### **Aerial application:**

Aerial application of **QUAT 50 SL** 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 to 40 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 aurally at a lower volume rate than recommended above.
- Droplet coverage: 30 to 40 droplets per cm<sup>2</sup> must be recovered at the target area.
- Droplet size: A droplet spectrum with a VMD of 280 to 300 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 is diving, climbing or when banking.
- Use suitable atomizing 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 atomizers 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.

**APPLICATION RATES**

<b>Application timing</b>	<b>Dosage rate mL / ha</b>	<b>Growth stage</b>
<b>First treatment</b>	125	Plant height < 20 cm and growth rate of 5 to 7 cm per week
	150 to 200	Plant height > 20 cm and growth rate of > 8 cm per week
	150 to 200	Plant height > 25 cm
<b>Remarks - First application:</b>		
<ul style="list-style-type: none"> <li>• Apply the first treatment during the early flower bud stage.</li> <li>• Use the lower rate when the first flower buds appear, and plant height is less than 20 cm.</li> <li>• Use the higher rates when the plants are higher than 20 cm and when the application takes place one week later.</li> </ul>		
<b>Follow-up treatments</b>	125 to 150	Use the lower rate in case of moderate growth (5 to 7 cm per week) and/or short spray intervals.
	150 to 200	Use the higher rate in case of excessive growth (> 8 cm per week) and/or longer spray intervals.
	250	Use the highest rate in case of extremely excessive growth (> 10 cm per week).
<b>Remarks - Follow-up treatments:</b>		
<ul style="list-style-type: none"> <li>• Repeat with intervals of about two (2) weeks with a <b>minimum of seven (7) days</b> and a <b>maximum of 18 days</b>, depending on the growth rate of the crop.</li> <li>• Use the shorter intervals and/or higher dosage rates in cases of high growth rates or if expected. Compensate longer intervals with higher rates.</li> <li>• Excessive growth normally occurs under high rainfall and high temperature conditions, on very fertile soils and/or where high levels of nitrogen fertilisation have been supplied.</li> </ul>		
<b>Final treatment</b>	300 to 500	Use the lower rate in case of low growth rate. Use the higher rate in case of moderate to strong growth.
<b>Remarks - Final treatment:</b>		
<ul style="list-style-type: none"> <li>• Apply the final treatment at the end of the effective flowering period.</li> <li>• It is recommended to use a higher dosage rate, as indicated above, in order to eliminate further vegetative growth of the crop.</li> </ul>		