

BEFORE USING THIS PRODUCT READ THE LABEL CAREFULLY!

## Plant Growth Regulator



# ETHEPHON 480 SL

Reg. No. L 4776 Act/Wet No. 36 of/van 1947  
N-AR 0994

5:31/5/2019 – April 2020

*A soluble concentrate plant growth regulator for use on crops as indicated.  
'n Oplosbare konsentraat plantgroeireguleerder vir gebruik op gewasse soos aangedui.*

**ACTIVE INGREDIENT / AKTIEWE BESTANDEEL**  
ethephon 480 g/l etefon

1 l

**villa** 

Registration holder / Registrasiehouer:  
Villa Crop Protection (Pty) Ltd.  
Co. Reg. No. / Mpy. Reg. Nr. 1992/002474/07  
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UN Number: 2922

Willow Set & Print 011 394-4486



**CAUTION  
VERSIGTIG**



GERUUKSAANWYSINGS INGESLUIT

VERWYS NA BESONDERHEDE  
Date formulated: **GEDRUK OP HOUER/SAK**  
Formuleringsdatum:

DIRECTIONS FOR USE ENCLOSED

REFER TO DETAILS PRINTED  
Batch number: **ON CONTAINER/BAG**  
Lotnummer:

**ETHEPHON 480 SL**

Reg. No. L 4776 / N-AR 0994 Act/Wet No. 36 of/van 1947

**ACTIVE INGREDIENT / AKTIEWE BESTANDEEL:**

ethephon / etefon ..... 480 g/l

Registration holder / Registrasiehouer:

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

Co. Reg. No. 1992/002474/07 Mpy. Reg. Nr

PO Box / Posbus 10413, KEMPTON PARK, 1620

Tel. (011) 396 2233

**CAUTION / VERSIGTIG****WARNINGS**• **IMPORTANT - EXPORT CROPS**

**IN THE CASE OF CROPS INTENDED FOR EXPORT, CONFIRM WITHHOLDING PERIODS WITH THE RELEVANT EXPORTING ORGANISATION. IF THIS PRODUCT IS USED ACCORDING TO THE RECOMMENDATIONS ON THIS LABEL, THE LOCAL MRL VALUES WILL NOT BE EXCEEDED. HOWEVER, VILLA CROP PROTECTION (PTY) LTD. CANNOT ACCEPT RESPONSIBILITY FOR EXPORTED CROPS EXCEEDING THE IMPORT TOLERANCES OF OTHER COUNTRIES.**

- Handle with care.
- Product is corrosive.
- May cause severe damage to eyes.
- Harmful when swallowed, inhaled or absorbed through the skin.
- Store away from food, feeds, seed and other agricultural chemicals.
- 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.

**Aerial application:**

Notify all inhabitants in the immediate area 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 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**

- Avoid eye and skin contact and inhalation of spray mist or vapour.
- Wear protective clothing, rubber gloves, shoes and a face shield when handling the concentrate, mixing and during application of the product.
- Wash contaminated clothing after use.
- Wash with soap and water after use or after accidental skin contact.
- Do not eat, drink or smoke while mixing, applying or before washing hands and face or change of clothing.
- Prevent spray drift and/or contamination onto susceptible crops, grazing, rivers, dams and any other areas not under treatment.
- Clean application equipment after use. Do not dispose of wash water where it can contaminate other crops, grazing, boreholes, rivers or dams.
- **TRIPLE RINSE** empty containers in the following manner: Invert the empty container over the spray or mixing tank and allow draining for at least 30 seconds after the flow has slowed down to a drip. Thereafter rinse the container three times with a volume of water equal to a minimum of a third of that of the container. Add the rinsing to the contents of the spray tank before destroying the container in the prescribed manner.
- Destroy the container by perforation and flattening and dispose of it in a safe way.

- **Do not** re-use the empty container for any other purpose.
- Prevent contamination of food, feeds, drinking water and eating utensils.

#### **USE RESTRICTIONS**

- Spray deposits of **ETHEPHON 480 SL** plant growth regulator, if left on acrylic, plastic type aircraft windshields for more than one hour, may react with this material.
- An opaque film or spots may form on the surface, which cannot be removed by washing or with any other cleaner.
- Windshields should be rinsed with water after each tank load of **ETHEPHON 480 SL** has been sprayed.
- The aircraft should be rinsed thoroughly each day after spraying **ETHEPHON 480 SL**.

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

**ETHEPHON 480 SL** must only be applied with a calibrated sprayer that is in good working order.

#### **Mixing instructions:**

- Fill the spray tank with half of the required amount of water.
- Add the required amount of **ETHEPHON 480 SL** while agitating.
- Add the remaining amount of water.
- Ensure thorough agitation of the mixture in the tank during mixing and spraying.
- Prepare only as much spray solution as can be used on one day of spraying.
- Do not allow the spray solution to stand overnight.
- Thoroughly flush out the spraying equipment at the end of the spraying operation.

#### **Compatibility:**

**ETHEPHON 480 SL** can be mixed with **Villa 51**. The full range of physical compatibility of **ETHEPHON 480 SL** with other pesticides and fertilizers is not known. Therefore, before preparing commercial tank mixes, add a small amount of **ETHEPHON 480 SL** to a proportional volume of water and then the pesticide. Do not use mixtures that curdle, precipitate or grease.

#### **Early detection of latent Citrus black spot (CBS):**

- Samples must be collected eight (8) weeks prior to harvest from sensitive indicator trees, within each orchard (sensitive indicator trees are trees in a poor condition and trees at rows ends where there is a concentration of risk of deficient spray application).
- The sample size should be 100 fruit per orchard (up to 5-hectare orchards).
- If an orchard exceeds 5 hectares, the sample size should be increased by 20 fruit per hectare greater than 5 hectares.
- Half of the sample (50 fruit) should be collected from row end trees, evenly spread across both ends of the orchard.
- The remaining sample (50 fruit) should be collected from trees in poor condition. If there are less than 10 trees in poor condition, the shortfall should be corrected by collecting fruit from trees evenly spaced in a diagonal transect across the orchard.
- From each sample tree, collect the fruit from the lower outside portion of the tree canopy on the sunny side of the tree.
- **All the treated fruit must be disposed of and none of them may be consumed.**

#### **Aerial Application:**

Aerial application of **ETHEPHON 480 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 minimum spray mixture volume of 30 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:** 25 to 35 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 aircraft dives, is in a climb or when banking.
- Use suitable atomising 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 atomisers 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:
  - 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.

#### APPLICATION RATES

<i>Crop / Use</i>	<i>Dosage Rate</i>	<i>Remarks</i>
<b>Citrus</b> Early detection of latent Citrus black spot	8 ml / 1 ℓ water	Prepare an <b>ETHEPHON 480 SL</b> suspension in a suitable container. Dip fruit into the suspension for five (5) minutes. Ensure all fruit are submerged. After removing the fruit from dipping, let them air-dry overnight. Store the fruit at approximately +/- 25°C under dry conditions for fourteen (14) days. <b>Destroy fruit after inspection.</b>
<b>Sugarcane</b> Increase sucrose content	1.5 ℓ / 30 ℓ water / ha	Ensure thorough coverage by means of aerial application. To obtain maximum benefit, apply only to actively growing cane 6 to 12 weeks before harvest.
<b>Pineapples</b> Colouring of fruit	2.0 to 4.0 ℓ / 500 to 1000 ℓ water / ha	<b>ETHEPHON 480 SL</b> may affect sugar concentration unless applied at or just after natural colour change. For uniform colouring, ensure a thorough coverage of fruit with the spray solution. For maximum benefit direct spray on fruit only.
Induce flowering: Cayenne's	1.0 ℓ <b>PLUS</b> 50 ℓ U.A.N. (32) / 2500 ℓ water / ha	Apply to plants when they are ready to be forced to flower.
Induce flowering: Queens	125 ml <b>PLUS</b> 1.5 ℓ U.A.N. (32)	Use 20 ml of mixture per individual plant or sucker. Apply to individual plants or suckers when they are ready to be forced to flower.
<b>Cherries</b> (Sour and Yellow) Uniform ripening and easier harvest	50 ml / 100 ℓ water	<b>NOT SUITABLE FOR FRESH MARKET CHERRIES.</b> Apply as a full cover spray approximately 10 days prior to anticipated harvest.

<b>Crop / Use</b>	<b>Dosage Rate</b>	<b>Remarks</b>
<p><b>Wheat</b> Reducing the incidence of lodging in susceptible varieties grown under conditions conducive to lodging (SST33, 44, 66 &amp; 107, Elize, Inia &amp; Palmiet)</p>	1.0 to 1.25 ℓ / ha	<p>Apply between stages 15 (matured flag leaf visible) and 16 (awns of the ear visible), according to the growth stages of the ARC-Small Grain Institute in Bethlehem.</p> <p><b>Ground Application:</b> Ensure the spray boom is approximately 50 cm above the crop. Apply as a full cover spray in 250 to 450 litres water per hectare.</p> <p><b>Aerial application:</b> Refer to “<b>Aerial Application</b>” instructions above.</p>
<p><b>NOTES</b></p> <ul style="list-style-type: none"> <li>• Ensure that insect, weed and disease control in the crop to be treated, are of a high standard.</li> <li>• <b>ETHEPHON 480 SL</b> only becomes effective 7 to 10 days after application.</li> <li>• The efficacy of the product may be impaired due to abnormal environmental conditions. Do not apply to wheat crops under drought stress or if rain is imminent.</li> <li>• Do not commence irrigation within 6 hours after application.</li> <li>• Allow 7 days between last application and harvest or grazing of wheat.</li> </ul>		
<p><b>Apples</b> Improved colour development (Starking types) and Enhancement of maturity (Starking types &amp; Granny Smith)</p>	75 to 85 ml / 100 ℓ water	<p><b>Only for the local market.</b> Application as a full cover spray should be performed 2 to 3 weeks before anticipated harvest. Use the lower dosage rate if high temperature conditions occur whilst spraying.</p>
<p><b>Cotton</b> To accelerate opening of mature, unopened cotton bolls</p>	2.0 to 3.0 ℓ / ha	<p>Apply as full cover spray when 60 % of the bolls are open or mature. A boll is mature when it is very hard and won't dent when squeezed, is difficult to slice with a sharp knife and the seed coat is light brown in colour.</p> <p>Ensure bolls are well covered by the spray.</p> <p><b>Ground application:</b> Apply in 150 to 350 litres water per hectare.</p> <p><b>Aerial application:</b> Apply in 40 to 50 litres water per hectare. Use the lower rate only on wide spaced cotton.</p>
<p><b>NOTES</b></p> <ul style="list-style-type: none"> <li>• Do not plant a follow-up crop within 30 days after treatment.</li> <li>• Do not apply if rain is expected within 6 to 8 hours.</li> <li>• Do not apply on cotton planted after 15 November, or before 150 days after planting or at 70 % boll opening. Some premature drop of small, immature bolls may be associated with the treatment. <b>ETHEPHON 480 SL</b> may stimulate the opening of bolls, which are not mature. This could lead to lower quality seed and lint, which can be minimized by closely monitoring the crop and applying <b>ETHEPHON 480 SL</b> when there are sufficient mature unopened bolls to produce the desired yield.</li> </ul>		
<p><b>Peaches</b> Enhancement of maturity Early cultivars</p>	20 ml / 100 ℓ water	<p><b>Only for Culemborg, Rhodes, Van Riebeeck and Earlibelle (the latter only in Gauteng) cultivars.</b> Application as a full cover spray is performed 2 to 3 weeks before anticipated harvest. The addition of a registered wetting agent is recommended.</p>
<p><b>Plums</b> Advanced and more uniform ripening</p>	20 ml / 100 ℓ water <b>PLUS</b> registered wetting agent	<p><b>Only for Cultivars Santa Rosa, Gaviota and Golden King cultivars.</b> Apply as a full cover spray 2 weeks before anticipated harvest to commencement of harvest.</p>

<b>Crop / Use</b>	<b>Dosage Rate</b>	<b>Remarks</b>
<b>Grapes</b> Colour improvement of Barlinka cultivar	50 ml / 100 ℓ water	<b>Only for Barlinka cultivar.</b> Apply at 5 % colouring of berries. Harvest at the correct degree of maturity, according to the sugar/acid content.
Colour improvement of Flame and Crimson Seedless cultivars	40 ml / 100 ℓ water  <b>OR</b>  40 ml / 100 ℓ water  <b>PLUS</b>  50 to 100 g / 100 ℓ water <b>S-Abscissic Acid</b>	<b>Flame and Crimson Seedless cultivars.</b> Apply at veraison and follow up 7 days later. Harvest at the correct degree of maturity, according to the sugar/acid content. Climate conditions can play a significant role in colour development and the breakdown of the active ingredient <b>Ethephon</b> . Make sure you understand the conditions of the vineyard before it is treated. <b>Ensure that the MRL levels is lower than the intended target value before picking commences.</b>
<b>Litchis</b>  Control of late autumn vegetative flush (End March until beginning May)  <b>(Cultivars Mauritius, McLean's Red &amp; Early Delight only)</b>	  <u>Dry autumn:</u> 104 ml / 100 ℓ (500 ppm active ingredient)  <u>Wet autumn:</u> 208 ml / 100 ℓ (1000 ppm active ingredient)	The time for treatment depends on various factors (such as the production area, season, and the onset of the cold period), but is usually between end of March to beginning of May. Apply <b>only</b> to young as spot-spray treatment to soft vegetative flush just after unfolding of the foliage. Apply where new vegetative flush appears during late autumn. <b>ETHEPHON 480SL</b> will not be effective when applied later to extended vegetative growth. Ensure good coverage of the young flush foliage. Use the lower rate under dry weather conditions and the higher rate under wet weather conditions. <b>Do not</b> apply to sick or stressed trees.  <b>Do not</b> apply together with any other products.
<b>Macadamias</b> <b>(Cultivar Beaumont only)</b> To promote abscission of nuts	208 ml / 100 ℓ water  <b>PLUS</b>  0.1 % <b>Villa 51</b>	Also refer to " <b>NOTES</b> " below. Apply from March to July on trees when the nuts are physiologically mature. <u>Mist blowers (e.g. Cima, Jacto Arbus, Nobili):</u> Apply 4 to 5 litres <b>ETHEPHON 480 SL</b> per hectare in 2000 to 2500 litres water per hectare. <u>Handgun/Lance:</u> Apply 4.5 to 5.2 litres <b>ETHEPHON 480 SL</b> per hectare in 3000 to 3500 litres water per hectare. (Approximately 150 ml per 100 litres of water). <b>Ensure thorough wetting of all nuts.</b>
<b>NOTES</b>		
<ul style="list-style-type: none"> <li>It is important to confirm nut maturity by means of an "in-field" and "Home/Lab test". <ul style="list-style-type: none"> <li><u>In field test:</u> Check the colour of the inside of husk which should be brown to dark brown.</li> <li><u>Home/Lab test:</u> Take a sample of 100 nuts per cultivar, dehusk immediately, dry overnight in an oven/warming drawer at 90 °C (dry for longer if necessary), hand crack the next morning and float the kernels in a jug of tap water. Crop is mature if &gt;95 % of kernels float. Note that hybrids have a lower oil percentage than Integs therefore 95 % floating will not always be reached.</li> </ul> </li> <li>Apply approximately 2.5 to 4.0 litres spray mixture per tree for 5 to 6-year-old trees and 6 to 8 litres per tree for mature (8 to 10 year-old trees).</li> </ul>		

The following product mentioned in this label may be replaced with an equivalent product:

- VILLA 51** (L 8050 / W 130454 / N-AR 1090) = **WEN 51** (L 8315)

**VILLA 51** and/en **WEN 51** are registered products of / is geregistreerde produkte van  
**VILLA CROP PROTECTION (PTY) LTD.**