

BEFORE USING THIS PRODUCT READ THE LABEL CAREFULLY!

SHAKE THE BOTTLE WELL BEFORE USE.

Herbicide



ASTRON® 480 SC

Reg. No. L 8366 Act/Wet No. 36 of/van 1947

4-13/6/2013 - June 2017

A suspension concentrate herbicide for the control of weeds in sugarcane.

'n Suspensie konsentraat onkruidoder vir die beheer van onkruid in suikerkriet.

ACTIVE INGREDIENT / AKTIEWE BESTANDDEEL

mesotriene (callistemone) **480 g/l** mesotrioon (callistemoon)

HRAC HERBICIDE GROUP CODE **F2** HRAC ONKRUIDDODER GROEPPKODE



villa

Registration holder / Registrasiehouer:
Universal Crop Protection (Pty) Ltd.
Co. Reg. No. / Mpy. Reg. Nr. 1983/008184/07
PO Box / Posbus 801, Kempton Park, 1620
Tel: 011 396 2233
Website / Webblad: www.villacrop.co.za

UN Number: 3082

Willow Set & Print 011 394-4486



**CAUTION
VERSIGTIG**



GEBRUIKSAANWYSINGS INGESLUIT

VERWYS NA BESONDERHEDE
GEDRUK OP HOUER/SAK

Date formulated:
Formuleringsdatum:

DIRECTIONS FOR USE ENCLOSED

REFER TO DETAILS PRINTED
ON CONTAINER/BAG

Batch number:
Lotnommer:

ASTRON® 480 SC

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ACTIVE INGREDIENT / AKTIEWE BESTANDEEL:

mesotrione (callistemone) / mesotrioon (callistemoon)..... 480 g/l

Registration holder / Registrasiehouer:

UNIVERSAL CROP PROTECTION (PTY) LTD.

Co. Reg. No. 1983/008184/07 Mpy. Reg. Nr.

P.O. Box / Posbus 801, KEMPTON PARK, 1620

Tel. (011) 396 2233

CAUTION / VERSIGTIG**WARNINGS**

- May cause eye and skin irritation.
- Store in a dry, cool, well-ventilated place away from food, feeds, seed, fertilizers 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.

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 weeds 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 event of any uncertainty.

PRECAUTIONS

- Avoid inhalation of the spray mist.
- Avoid contact with the spray as far as possible.
- Wear protective clothing, a suitable mask, rubber gloves and boots when handling the product.
- In case of accidental contact with eyes, flush eyes immediately with running water for at least 15 minutes and get medical attention if necessary.
- In case of accidental contact with skin, flush with plenty of cold water and get medical attention if necessary.
- Do not eat, drink or smoke while mixing and applying, or before washing hands and face or change of clothing.
- Wash contaminated clothing daily.
- Avoid spray drift to susceptible crops, grazing, rivers, dams and areas not under treatment.
- Do not spray, drain or flush equipment on or near trees or plants or where their roots may extend.
- Thoroughly clean spraying equipment directly after use and dispose of wash water where it will not contaminate crops, grazing, boreholes, rivers, dams or areas not under treatment.
- **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.
- **Never** re-use the empty container for any other purpose.
- Prevent contamination of food, feeds, drinking water and eating utensils.

RESISTANCE WARNING

ASTRON® 480 SC is a group code F2 herbicide. Any weed population may contain individuals naturally resistant to **ASTRON® 480 SC** and other group code F2 herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds may not be controlled by **ASTRON® 480 SC** or any other group code F2 herbicide.

To delay herbicide resistance:

- avoid exclusive repeated use of herbicides from the same herbicide group code. Alternate or tank mix with products from different herbicide group codes,
- integrate other control methods (chemical, cultural, biological) into weed control programs.

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

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

ASTRON® 480 SC is compatible with the following products: **Halo 750 WDG/Crown 750 WDG, Villa 51, Summit Super** and **Bendioxide 480SL/Hornet 480 SL**.

- 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:

- Only use clean water.
- Fill the spray or mixing tank with clean water and ensure agitation.
- Shake the **ASTRON® 480 SC** container **thoroughly** before mixing it with the water.
- Add **ASTRON® 480 SC** slowly to the spray or mixing tank when it is half full with water and agitate until completely dispersed.
- Ensure continuous agitation throughout the mixing and spraying operation. If agitation was suspended for more than 5 minutes, first re-suspend the spray mixture before spraying.
- Mixing sequence for tank mixtures: first add any buffer followed by soluble dry formulation such as soluble granules (SG's). Then add **ASTRON® 480 SC** to the water. Next add SC's (suspension concentrates). Then add EC formulations (emulsifiable concentrates). Lastly add a surfactant (post-emergence applications only), e.g. **Villa 51**. Thereafter, fill the tank with water to the required final volume. Ensure agitation throughout the mixing and application process.
- Apply **ASTRON® 480 SC** the same day that the spray mixture was prepared.

USE RESTRICTIONS**General restrictions:**

- All recommendations on this label should be followed. Do not make any changes to dosage rates, product combinations or adjuvants, indicated on this label.
- Disturbing the soil following either pre- and/or post-emergence applications may result in reduced weed control due to re-germination of weeds.
- Prevent drift of **ASTRON® 480 SC** to adjacent crops. Smaller droplet sizes, prone to drift, must be avoided.
- Avoid overlapping of spray swaths.
- Poor weed control may be obtained where reduced tillage practices are followed, or in ratoon cane where a trash blanket is established, or on soils with high organic matter content due to the active ingredient being trapped on stubble or organic matter, especially under low rainfall conditions.
- Do not apply **ASTRON® 480 SC** where flood irrigation is used.

Post-emergence application restrictions:

- Apply **ASTRON® 480 SC** to actively growing weeds that are not under growth stress. Reduced or delayed weed control may occur if weeds are under stress conditions such as heat, droughts, flooding, prolonged cool temperatures or inadequate fertilization, since weeds may not be growing actively.
- Delay application of **ASTRON® 480 SC** until the stress conditions have improved, and ensure weeds are actively growing and within the susceptible growth stages as indicated below.
- Apply **ASTRON® 480 SC** on to the true leaves of the weeds as cotyledons of seedlings are not true leaves.
- Temporary bleaching injury to the crop may occur when the crop is under stress, under extreme weather conditions or prolonged overcast conditions.
- **Do not** apply mixtures of **ASTRON® 480 SC** with foliar applied organophosphate insecticides.

- **Do not** apply **ASTRON® 480 SC** within (1) one week before or after an organophosphate or carbamate insecticide treatment as the crop may be damaged.
- **ASTRON® 480 SC** may not be applied post-emergence through any irrigation system.

Follow-on crop restrictions:

- Only plant a follow-up crop after thorough cultivation of the soil.
- **ASTRON® 480 SC** is metabolized through microbial activity. Extended periods of low microbial activity might prolong the residual activity of **ASTRON® 480 SC** in the soil.
- Adhere to the following waiting periods before planting of follow-on crops:

| | |
|-------------------------------------|------------|
| Grain sorghum: | 2 months, |
| Potatoes: | 6 months, |
| Soybeans, Dry beans and Groundnuts: | 9 months, |
| Sunflowers and Cotton: | 9 months, |
| Wheat and Barley: | 1 month, |
| All other crops not listed above: | 24 months. |

APPLICATION INSTRUCTIONS

Ground application: (also refer to “**General Restrictions**” above):

- Apply with a correctly calibrated tractor-mounted boom sprayer that is in good working order.
- The use of 110° flat fan hydraulic nozzles is recommended to obtain the best coverage.
- Apply 200 to 300 litres spray mixture per hectare.
- Pre-emergence application at a reduced volume of 100 litres spray volume per hectare may only be done with hydraulic nozzles or post-emergence applications with sleeve boom sprayers, if **purpose designed low volume ground spraying equipment**, with the correct nozzle types, sizes and spacing, is used and adequate coverage is obtained. Also refer to the correct use of registered adjuvants at the correct rates.
- When using a sleeve boom sprayer, ensure that the air flow system works correctly in order to obtain complete coverage of the target weeds.
- Sleeve boom sprayers may not be used for pre-emergence applications of **ASTRON® 480 SC**.

Application recommendations:

- Use accurately calibrated equipment with properly arranged, suitable nozzles and an efficient agitation mechanism.
- Prepare a fine, even and firm seedbed, free of weeds, trash and clods.
- Apply **ASTRON® 480 SC** or its tank mixtures preferably at planting or immediately after planting, but not later than (3) three days after planting. Use 200 litres spray mixture per hectare for overall ground application, and 30 to 40 litres per hectare for aerial application.
- **ASTRON® 480 SC** must be shallowly incorporated into the soil early in the season, to ensure reliable weed control.
- 10 to 20 mm rain within 7 to 10 days after application is necessary for good results.
- Under dry conditions, weed seedlings may emerge. These are usually stunted and can be controlled with a shallow cultivation, which also mixes the herbicide with the top 10 to 20 mm of soil.
- If soil crusting becomes a problem, rotary harrow in the same direction the rows are planted, to assist crop germination.
- Harrowing after application may reduce weed control, if untreated soil is thrown into deep planter furrows.
- Ensure that sufficient fertilizer is placed near the seeds at planting, to promote vigorous seedling growth.

APPLICATION RATES

NOTES

- Control of listed weeds can be obtained for 4 to 8 weeks if **ASTRON® 480 SC** is applied according to instructions.
- **ASTRON® 480 SC** can be applied pre- or post-emergence of either the crop or the weeds.

SUGARCANE**IMPORTANT:** Refer to “USE RESTRICTIONS” above.

1. **Post-emergence application of ASTRON® 480 SC plus Crown 750 WDG/Halo 750 WDG plus Villa 51 or Summit Super for the control of Yellow nutsedge and certain broadleaf weeds in sugarcane:**

NOTES

- For optimum control of Nutsedge, apply **ASTRON® 480 SC plus Crown 750 WDG/Halo 750 WDG** on actively growing Nutsedge under moist conditions, 3 to 5 weeks after planting. Ensure that the application is made after the majority of the Nutsedges have germinated but before flowering. New germination of Nutsedge may occur if application was performed too early. Later applications, when the Nutsedges is in flower, will also give sub-optimal results.
- The adjuvants **Villa 51** or **Summit Super** must be used with all post-emergence applications of **ASTRON® 480 SC plus Crown 750 WDG/Halo 750 WDG** as indicated on the registered product labels.
- Refer to the **Crown 750 WDG/Halo 750 WDG** label for **USE RESTRICTIONS** and **DIRECTIONS FOR USE**.

| ASTRON® 480 SC 210 ml / ha | PLUS | PLUS | OR |
|--------------------------------------|--|---|---|
| | Crown 750 WDG / Halo 750 WDG 50 g / ha | Villa 51 0.1 % (100 ml / 100 litres) | Summit Super 0.3 % (300 ml / 100 litres) |

WEEDS CONTROLLED
THE FOLLOWING WEEDS ARE NORMALLY CONTROLLED AT THE DOSAGE RATE AS INDICATED ABOVE:

| Botanical name | Common name |
|-------------------------------|-----------------------|
| <i>Commelina benghalensis</i> | Bengal commelina |
| <i>Cyperus esculentus</i> | Yellow nutsedge |
| <i>Cyperus rotundus</i> | Purple nutsedge |
| <i>Digitaria nuda</i> | Naked crab grass |
| <i>Eleusine coracana</i> | Goose grass |
| <i>Ipomoea obscura</i> | Obscure morning glory |
| <i>Panicum subalbidum</i> | Elbow buffalo grass |

2. **Post-emergence application of ASTRON® 480 SC plus Bendioxide 480SL/Hornet 480 SL plus Villa 51 or Summit Super for the control of Yellow nutsedge and certain broadleaf weeds in sugarcane:**

NOTES

- For optimum control of Nutsedge, apply **ASTRON® 480 SC plus Bendioxide 480SL/Hornet 480 SL** on actively growing Nutsedge under moist conditions, 3 to 5 weeks after planting. Ensure that the application is made after the majority of the Nutsedges have germinated but before flowering. New germination of Nutsedge may occur if application was performed too early. Later applications, when the Nutsedges is in flower, will also give sub-optimal results.
- The adjuvants **Villa 51** or **Summit Super** must be used with all post-emergence applications of **ASTRON® 480 SC plus Bendioxide 480SL/Hornet 480 SL** as indicated on the registered product labels.
- Refer to the **Bendioxide 480SL/Hornet 480 SL** label for **USE RESTRICTIONS** and **DIRECTIONS FOR USE**.

| | | | |
|---|--|---|---|
| ASTRON® 480 SC 260 ml / ha | PLUS | PLUS | OR |
| | Bendioxide 480SL/Hornet 480 SL 2000 ml to 2500 ml / ha | Villa 51 0.1 % (100 ml / 100 litres) | Summit Super 0.3 % (300 ml / 100 litres) |
| WEEDS CONTROLLED | | | |
| THE FOLLOWING WEEDS ARE NORMALLY CONTROLLED AT THE DOSAGE RATE AS INDICATED ABOVE: | | | |
| Botanical name | | Common name | |
| <i>Ageratum conyzoides</i> | | Invading Ageratum | |
| <i>Amaranthus thunbergii</i> | | Red pigweed | |
| <i>Bidens pilosa</i> | | Common blackjack | |
| <i>Commelina benghalensis</i> | | Bengal commelina | |
| <i>Cyperus esculentus</i> | | Yellow nutsedge | |
| <i>Galinsoga parviflora</i> | | Gallant soldier | |
| <i>Ipomoea obscura</i> | | Obscure morning glory | |
| <i>Portulaca oleracea</i> | | Purslane | |
| <i>Sida cordifolia</i> | | Flannel weed | |
| <i>Solanum nigrum</i> | | Black nightshade | |
| <i>Tagetes minuta</i> | | Khaki bush | |

Consult the **Halo 750 WDG/Crown 750 WDG** and **Bendioxide 480SL/Hornet 480 SL** labels for **WARNINGS, PRECAUTIONS** and **DIRECTIONS FOR USE**.

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

- **HALO 750 WDG** (L 8283 / N-AR 1337) = **CROWN 750 WDG** (L 8282) = **STRIGO 750 WDG** (L 8671) (**Halosulfuron**),
- **BENDIOXIDE 480SL** (L 7707 / W 130531) = **HORNET 480 SL** (L7708 / N-AR 1338) = **BENXIDE 480 SL** (L 8127),
- **VILLA 51** (L 8050 / W 130454 / N-AR 1090) = **WEN 51** (L 8315) and
- **SUMMIT SUPER** (L 8539) = **BENEFIT PLUS** (L 8538).

HALO 750 WDG, HORNET 480 SL, VILLA 51, WEN 51, BENEFIT PLUS and/en **SUMMIT SUPER** are registered products of / is geregistreerde produkte van **VILLA CROP PROTECTION (PTY) LTD.**

BENDIOXIDE 480SL and/en **CROWN 750 WDG** are registered products of / is geregistreerde produkte van **UNIVERSAL CROP PROTECTION (PTY) LTD.**

STRIGO 750 WDG and/en **BENXIDE 480 SL** are registered products of / is geregistreerde produkte van **CROPASURE (PTY) LTD.**

ASTRON® 480 SC is a registered trademark of / is 'n geregistreerde handelsmerk van **VILLA CROP PROTECTION (PTY) LTD.**