

BEFORE USING THIS PRODUCT READ THE LABEL CAREFULLY!

Herbicide



HORNET 480 SL

Reg. No. L 7708 Act/Wet No. 36 of/van 1947
N-AR 1338

2-30/03/2018-Dec-2018

A selective contact soluble liquid herbicide for the post-emergence control of certain annual broad-leaved weeds and Yellow nutsedge in crops as indicated.

'n Selektiewe kontak oplosbare konsentraat onkruidodder vir die na-opkoms beheer van sekere eenjarige breëblaaronkruid en Geeluintjies in gewasse soos aangedui.

ACTIVE INGREDIENT / AKTIEWE BESTANDDEEL
bendioxide (thiadiazine) 480 g/l bendioksied (tiadiasien)

HRAC HERBICIDE GROUP CODE **C3** HRAC ONKRUIDDODER GROEPKODE



villa

Registration holder / Registrasiehouer:
Villa Crop Protection (Pty) Ltd.
Co. Reg. No. / Mpy. Reg. Nr. 1992/002474/07
PO Box / Posbus 10413, Aston Manor, 1630
Tel: 011 396 2233
Website / Webblad: www.villacrop.co.za

UN Number: 3082

Willow Set & Print 011 394-4486



**HARMFUL
SKADELIK**



DIRECTIONS FOR USE ENCLOSED

REFER TO DETAILS PRINTED
ON CONTAINER/BAG

Batch number:
Lotnommer:

GERUUKSAANWYSYNGS INGESLUIT
Date formulated:
Formuleringsdatum:

VERWYS NA BESONDERHEDE
GEDRUK OP HOUER/SAK

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ACTIVE INGREDIENT / AKTIEWE BESTANDEEL:

bendioxide (thiadiazine) / bendioksied (tiadiasien)480 g/l

Registration holder / Registrasiehouer:

VILLA CROP PROTECTION (PTY) LTD.

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

P.O. Box / Posbus 10413, ASTON MANOR, 1630,

Tel. (011) 396 2233

**HARMFUL****SKADELIK****WARNINGS**

- Harmful when swallowed.
- Irritating to eyes and skin.
- Do not contaminate dams, rivers, lakes or any other water sources.
- Store in a cool, dry, well-ventilated area.
- Store 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 within 1 day after treatment unless wearing protective clothing.
- **In case of poisoning immediately call a physician and make this label available to him/her.**

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 to the remedy concerned, 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

- Do not inhale spray fumes or spray mist.
- Avoid contact with skin, eyes and clothing.
- Wear a face shield, rubber gloves and boots when handling, preparing and applying the spray mixture.
- Wash with soap and water immediately after use and accidental skin contact.
- Wash contaminated clothing after use.
- Do not eat, drink or smoke while mixing and applying, or before washing hands and face and change of clothing.
- Prevent drift onto other crops, grazing, rivers, dams or areas not under treatment or to nearby water sources.
- Clean applicator after use and dispose of wash water where it will not contaminate food, grazing, rivers or dams.
- Containers and packages must be completely emptied before being disposed of.
- **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 the volume of the container. Add the rinsing to the contents of the spray tank before destroying the container in the prescribed manner.
- **Do not** re-use the container for any other purpose.
- **Do not burn the empty container.**
- Prevent contamination of food, feeds, drinking water and eating utensils.

SYMPTOMS OF POISONING

Symptoms of intoxication can include nausea, diarrhoea, trembling, weakness and irregular breathing.

FIRST AID TREATMENT

- **In case poisoning is suspected:** Remove the affected person from the area of contamination to a well-ventilated room or to fresh air, and keep him/her warm and at rest. Keep the airway clear to maintain respiration, particularly when the patient is unconscious or has vomited. The mouth and pharynx should be cleared and dentures removed. Treat respiratory difficulty with artificial mouth-to-nose respiration. Administration of oxygen and lavage must be performed by qualified medical personnel. Emergency personnel should wear gloves and avoid contamination.
- **Skin contact:** Remove contaminated clothing, shoes and leather goods immediately. Gently wipe of excess chemical. Wash skin gently and thoroughly with water and soap. Do not rub the skin. Seek medical advice if necessary.
- **Eye contact:** In case of contact with eyes, immediately flush the eyes with clean, gently flowing lukewarm water for at least 20 minutes, holding the eyelid(s) open. Seek medical attention immediately.
- **Inhalation:** Maintain airway and administer oxygen if necessary. Treat symptomatically and supportively. Seek medical advice immediately.
- **Ingestion:** Have victim rinse mouth thoroughly with water. Do not induce vomiting. If the person is alert and respiration is not depressed, administer large quantities of water. Never give anything by mouth to an unconscious person. Treat respiratory difficulty with artificial respiration and oxygen. Treat symptomatically and supportively.

ADVICE TO PHYSICIAN

No antidote available. Treat symptomatically and supportively. In cases of ingestion of large amounts, gastric lavage may be indicated.

RESISTANCE WARNING

HORNET 480 SL is a group code C3 herbicide. Any weed population may contain individuals naturally resistant to **HORNET 480 SL** and other group code C3 herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds may not be controlled by **HORNET 480 SL** or any other group code C3 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 programmes.

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

USE RESTRICTIONS

- **Potatoes:** Only use on cultivars **Up to date, BP 1** and **Van der Plank**. **HORNET 480 SL** may cause temporary leaf burn, but will not adversely affect the yield.
- If **HORNET 480 SL** is applied as a tank mixture with **Atrazine**, follow-up crops other than maize, may be damaged. Consult the **Atrazine** label for details.
- **BENDIOXIDE 480SL** may harm legume crops if an organophosphate insecticide was applied to the soil during planting.
- If frost or very cold temperatures occur, or are expected, it is advised not to apply **HORNET 480 SL** since the crop may be harmed.
- **HORNET 480 SL DOES NOT** control grasses and Purple nutsedge (*Cyperus rotundus*).
- Warm and humid weather is required for optimal weed control. A decrease in efficacy can be expected under dry conditions.
- Weeds and Yellow nutsedge that have not yet emerged at the time of application will not be controlled.

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

HORNET 480 SL is compatible with **Atrazine 500 SC, Cantron® 480 SC, Terbuweed 600 WDG/Terbucide 600 WDG, TERBUSIEN SUPER 600 SC** (L 5435 / N-AR 1110), **Villa 51** and **Summit Super**.

Application:

- Apply **HORNET 480 SL** as an early post-emergence application when weeds are young and actively growing.

- Good coverage of the weeds is essential since **HORNET 480 SL** is a contact herbicide. Rain or irrigation within 8 hours after application may adversely affect the effectiveness of the **HORNET 480 SL** treatment.
- Apply **HORNET 480 SL** in a minimum of 300 litres water per hectare. Use flat fan or hollow cone nozzles at a pressure of 350 kPa.
- Use accurately calibrated equipment with suitable correctly spaced nozzles and an effective agitation mechanism.

APPLICATION RATES

1.1 VARIOUS CROPS: APPLICATION RATES FOR HORNET 480 SL FOR THE CONTROL OF BROAD-LEAVED WEEDS.

<i>Crop</i>	<i>Dosage</i>	<i>Remarks</i>
<u>Beans</u> (Dry and green beans)	2 to 3 ℓ / ha	Apply at 2 litres per hectare after the beans have reached first trifoliate stage, but before reaching the second trifoliate stage. Thereafter the 3 litres per hectare rate can be used. Temporary leaf burn may occur, but will not adversely affect yield. In the interior areas, especially with a high sun- and light intensity, do not exceed the 2 litres per hectare rate on green beans as it may cause crop damage.
<u>Groundnuts</u>	2 to 3 ℓ / ha	Apply after the first trifoliate stage has been reached. A follow-up application can be performed if late germinating weeds are a problem.
<u>Soybeans</u>	2 to 3 ℓ / ha	Apply after the second trifoliate stage has been reached. A follow-up application can be performed if late germinating weeds are a problem. Temporary leaf burn may occur, but will not adversely affect yield.
<u>Peas</u>	2 to 3 ℓ / ha	Apply when the crop has reached a height of 5 to 15 cm. The size of the weeds must correspond with the growth stages as listed in the “ WEED CONTROL ” table below.
<u>Potatoes</u>	2 to 3 ℓ / ha	Apply after the crop has fully emerged and a good population density has been attained, but before flower buds develop. Shading of the weeds by large potato plants can reduce weed control.
<u>Maize, Grain sorghum, Wheat & other Small Grain Crops</u>	2 to 3 ℓ / ha	HORNET 480 SL can be applied at any growth stage of grain crops. The size of the weeds must correspond with the growth stages as listed in the “ WEED CONTROL ” table below.

1.2 VARIOUS CROPS: APPLICATION RATES FOR HORNET 480 SL FOR THE CONTROL OF CONTROL OF YELLOW NUTSEDGE.

- Yellow nutsedge (*Cyperus esculentus*) that have emerged can be controlled if the following favourable conditions existed before and during application: warm, humid weather (relative humidity above 65 %) and sufficient soil moisture.
- A large percentage of Yellow nutsedge plants must have developed beyond the 4-leaf stage at the time of application.
- Apply a minimum dosage of 3 litres per hectare in at least 300 litres water per hectare. Refer to the table below for specific crops.
- In case of high Yellow nutsedge population densities in maize, grain crops, groundnuts and potatoes, the dosage rate must be increased to 4 litres per hectare. In extreme cases it can be increased to 5 litres per hectare. Use 500 litres water per hectare for these increased dosage rates. It is advised to make these applications with hollow cone nozzles at a pressure of 500 kPa with the addition of a suitable wetting or sticking agent.

- The period of weed control depends on the germination success of the Yellow nutsedge, as well as the conditions before, during and after application.
- A **second application** of **HORNET 480 SL** must be performed if re-growth or late germination of Yellow nutsedge occurs.
- A **second application** of **HORNET 480 SL**, 7 to 10 days after the first treatment, may also be necessary if the Yellow nutsedge has only been suppressed due to less favourable conditions and re-growth occurs. The addition of a suitable wetting or sticking agent is advised under these conditions.
- **HORNET 480 SL** will not control Yellow nutsedge under **unfavourable conditions** (drought, cold weather, dry windy conditions and low humidity).

Application rates of HORNET 480 SL for the control of Yellow nutsedge.

Crops	Dosage	Remarks
Green and Dry beans, Soybeans & Peas	3 ℓ / ha	Do not apply more than 3 litres per hectare, since higher dosage rates may cause damage to the crops.
Maize and Grain crops, Groundnuts & Potatoes	3 to 5 ℓ / ha	

2.1 MAIZE AND GRAIN SORGHUM: APPLICATION RATES FOR HORNET 480 SL FOR THE CONTROL OF BROAD-LEAVED WEEDS.

Application rates of HORNET 480 SL plus Atrazine 500 SC.

Crop	Soil type	Dosage	Remarks
Maize	All soils	2 ℓ HORNET 480 SL PLUS 2 ℓ Atrazine 500 SC / ha	For improved control of Pigweed, Mexican Richardia, Dwarf marigold and Common dubbeltjie. Observe the warnings and restrictions on the Atrazine 500 SC label.
Grain sorghum	Only above 16 % clay		

WEEDS CONTROLLED BY HORNET 480 SL:

Botanical name	Common name	Leaf stage and Dosage	
		2 ℓ / ha	3 ℓ / ha
<i>Acanthospermum hispidum</i> *	Upright starbur	6	8
<i>Argemone subfusiformis</i>	Mexican poppy	4	6
<i>Bidens pilosa</i> *	Common blackjack*	4	6
<i>Chenopodium album</i>	White goosefoot	2	4
<i>Cleome monophylla</i>	Single leaved cleome	4	6
<i>Commelina benghalensis</i> **	Bengal commelina**		4
<i>Cyperus esculentus</i>	Yellow nutsedge	Refer "Control of Yellow nutsedge" above	
<i>Datura stramonium</i> *	Common thorn apple*	6	8
<i>Datura ferox</i> *	Large thorn apple*	6	8
<i>Galinsoga parviflora</i>	Small-flowered quickweed	4	6
<i>Hibiscus trionum</i>	Bladder hibiscus	4	6
<i>Ipomoea purpurea</i>	Morning glory		4
<i>Nicandra physaloides</i> *	Apple of Peru*	4	6
<i>Portulaca oleracea</i>	Common purslane	4	6
<i>Raphanus raphanistrum</i>	Wild radish	4	6
<i>Richardia brasiliensis</i> **	Mexican richardia**		2
<i>Schkuhria pinnata</i> **	Dwarf marigold**	2	4
<i>Senecio consanguineus</i>	Rag wort	4	6
<i>Sida spinosa</i>	Sida	4	6
<i>Tagetes minuta</i>	Tall khaki weed	4	6
<i>Tribulus terrestris</i> **	Common dubbeltjie**	2	4
<i>Xanthium strumarium</i> *	Large cockle bur*	6	8

* If conditions are favourable, and the weeds are smaller than 4-leaf stage, these listed weeds can be controlled at 1.5 litres **HORNET 480 SL** per hectare.

** These weeds are controlled variably.

ADDITIONAL WEED SPECIES CONTROLLED BY A TANK MIXTURE OF HORNET 480 SL AND ATRAZINE 500 SC:		
Botanical name	Common name	Leaf stage and Dosage 2 l / ha + 2 l / ha
<i>Amaranthus brasiliensis</i>	Pigweed	4
<i>Amaranthus hybridus</i>	Cape pigweed	4
<i>Amaranthus spinosus</i>	Thorny pigweed	4

IMPROVED CONTROL OF THE FOLLOWING WEED SPECIES BY A TANK MIXTURE OF HORNET 480 SL AND ATRAZINE 500 SC:		
Botanical name	Common name	Leaf stage and Dosage 2 l / ha + 2 l / ha
<i>Richardia brasiliensis</i>	Mexican richardia	4
<i>Schkukria pinnata</i>	Dwarf marigold	4
<i>Tribulus terrestris</i>	Common dubbeltjie	4

Post-emergence application of HORNET 480 SL plus Cantron® 480 SC plus Terbuweed 600 WDG/ Terbucide 600 WDG or Terbusien Super 600 SC plus Villa 51 or Summit Super for the control of Yellow nutsedge and certain broadleaf weeds in maize:

NOTES

- Apply this post-emergence application as a follow up to a pre-emergence application of **Cantron® 480 SC** in tank mixture with **Metolachlor 800 EC** or **Metolachlor 915 EC/Platinum Plus 915 EC** or **Leap 840 EC/Premium 840 EC** as indicated on the registered labels.
- The adjuvants **Villa 51** or **Summit Super** must be used with all post-emergence applications of **HORNET 480 SL** plus **Cantron® 480 SC** plus **Terbuweed 600 WDG/Terbucide 600 WDG** or **Terbusien Super 600 SC** as indicated on the registered product labels.
- For optimum control of Nutsedge, apply **HORNET 480 SL** plus **Cantron® 480 SC** plus **Terbuweed 600 WDG/Terbucide 600 WDG** or **Terbusien Super 600 SC** 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.
- Refer to the **Cantron® 480 SC**, **Terbuweed 600 WDG/Terbucide 600 WDG** or **Terbusien Super 600 SC** label for **USE RESTRICTIONS** and **DIRECTIONS FOR USE**.

HORNET 480 SL 2000 to 2500 ml / ha	PLUS	PLUS		PLUS
	Cantron® 480 SC 210 to 260 ml / ha	Terbuweed 600 WDG/ Terbucide 600 WDG 800 g / ha	OR Terbusien Super 600 SC 800 ml / ha	Villa 51 0.1 % OR Summit Super 0.15 to 0.3 %
WEEDS CONTROLLED				
THE FOLLOWING WEEDS ARE NORMALLY CONTROLLED AT THE DOSAGE RATE AS INDICATED ABOVE:				
Botanical name		Common name		
<i>Bidens pilosa</i>		Common blackjack		
<i>Cyperus esculentus*</i>		Yellow nutsedge		
<i>Tagetes minuta</i>		Khaki bush		

NOTES

- Higher dosage rates of **Terbusien Super 600 SC** or **Terbuweed 600 WDG/Terbucide 600 WDG**, may be applied for control of additional broadleaf weed species, difficult to control weeds, high weed pressure situations and longer residual control of broadleaf weeds. Refer to the **Terbusien Super 600 SC** or **Terbuweed 600 WDG/Terbucide 600 WDG** labels for dosage rates, and a list of additional weeds controlled by this product.
- Consult the **Cantron® 480 SC** labels for additional broadleaf weeds that may also be controlled.

SUGARCANE

- POST-EMERGENCE APPLICATION OF HORNET 480 SL PLUS CANTRON® 480 SC PLUS VILLA 51 OR SUMMIT SUPER FOR THE CONTROL OF YELLOW NUTSEdge AND CERTAIN BROADLEAF WEEDS IN SUGARCANE.**

NOTES

- The adjuvants **Villa 51** or **Summit Super** must be used with all post-emergence applications of **HORNET 480 SL** plus **Cantron® 480 SC** as indicated on the registered product labels.
- For optimum control of Nutsedge, apply **HORNET 480 SL** plus **Cantron® 480 SC** 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.
- Refer to the **Cantron® 480 SC** label for **USE RESTRICTIONS** and **DIRECTIONS FOR USE**.

HORNET 480 SL 2000 to 2500 ml / ha	PLUS Cantron® 480 SC 260 ml / ha	PLUS Villa 51 0.1 % (100 ml / 100 litres)	OR 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 **Cantron® 480 SC**, **Metolachlor 800 EC**, **Leap 840 EC/Premium 840 EC**, **Terbusien Super 600 SC**, **Terbuweed 600 WDG/ Terbucide 600 WDG**, **Metolachlor 915EC/Platinum Plus 915 EC**, **Villa 51** and **Summit Super** labels for **WARNINGS**, **PRECAUTIONS** and **DIRECTIONS FOR USE**.

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

- **CANTRON® 480 SC** (L 8365 / N-AR 1323 / W 130651) = **ASTRON® 480 SC** (L 8366) = **CANONNE 480 SC** (L 8735), (**Mesotrione**),
- **TERBUWEED 600 WDG** (L 8800) = **TERBUCIDE 600 WDG** (L 8799 / W 1301046) = **TERBUMAIS 600 WDG** (L 8798), (**Terbuthylazine**),
- **METOLACHLOR 800 EC** (L 7137) = **METOLACHLOR 800 EC** (L 7433) = **MAESTRO PLUS 800 EC** (L 8090),
- **METOLACHLOR 915EC** (L 7841 / N-AR 1361) = **PLATINUM PLUS 915 EC** (L 7844) = **PLATINUM PLUS 915 EC** (L 8249),
- **LEAP 840 EC** (L 8064 / N-AR 1103) = **PREMIUM 840 EC** (L 8066) = **ARMANN SUPER 840 EC** (L 8373) (**Acetochlor**),
- **VILLA 51** (L 8050 / N-AR 1090 / W 130454) = **WEN 51** (L 8315) and
- **SUMMIT SUPER** (L 8539) = **BENEFIT PLUS** (L 8538).

ASTRON® 480 SC, METOLACHLOR 800 EC, METOLACHLOR 915EC, PREMIUM 840 EC and/en **TERBUCIDE 600 WDG** are registered products of / is geregistreerde produkte van **UNIVERSAL CROP PROTECTION (PTY) LTD.**

CANTRON® 480 SC, TERBUWEED 600 WDG, METOLACHLOR 800 EC, PLATINUM PLUS 915 EC, LEAP 840 EC, VILLA 51, WEN 51, TERBUSIEN SUPER 600 SC, BENEFIT PLUS and/en **SUMMIT SUPER** are registered products of / is geregistreerde produkte van **VILLA CROP PROTECTION (PTY) LTD.**

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