

BEFORE USING THIS PRODUCT READ THE LABEL CAREFULLY!

Herbicide



ALACHLOR 384 EC

Reg. No. L 4348 Act/Wet No. 36 of/van 1947
N-AR 1342

6: 7/10/2013 – May 2017

A pre-emergence emulsifiable concentrate herbicide for the control of most annual grasses and certain broad-leaved weeds in maize, groundnuts, soybeans, sunflowers, potatoes, transplanted cabbage, broccoli, Brussels sprouts and sugar cane.

'n Emulgeerbare konsentraat vooropkomsunkruiddoder vir die beheer van meeste eenjarige grasse en sekere breëblaaronkruid in mielies, grondbone, sojabone, sonneblomme, aartappels, uitgeplante kopkool, brokkoli, spruitkool en suikerriet.

ACTIVE INGREDIENT / AKTIEWE BESTANDDEEL

alachlor (chloroacetanilide) 384 g/l alachlor (chloroasetanilied)

HRAC HERBICIDE GROUP CODE **K3** HRAC ONKRUIDDODER GROEPKODE



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
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UN Number: 3082



HARMFUL
SKADELIK

Willow Set & Print 011 394-4486



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:
Lotnummer:

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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

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

- Handle with care
- Can be toxic to fish.
- Poisonous if swallowed.
- 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 call a doctor and make this label available to him/her.**

Aerial application

Notify all inhabitants in the immediate vicinity of the area to be sprayed and issue the necessary warnings. Do not spray over or allow drift to contaminate water or areas not under treatment.

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

- Do not inhale fumes or the spray mist.
- Wear rubber gloves when handling, preparing and applying the spray mixture.
- Wash contaminated clothing after use.
- Wash with soap and water after use or after accidental skin contact.
- In case of accidental contact with skin or eyes, flush with plenty cold water.
- Get medical attention if necessary.
- 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 or any other areas not under treatment.
- Clean the application equipment after use. Do not dispose of wash water where it can contaminate other crops, grazing, 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 empty container by perforation and flattening.

- **Never** re-use the empty container for any other purpose.
- Prevent contamination of foods, feeds, drinking water and eating utensils.

SYMPTOMS OF HUMAN POISONING

The solvents may irritate the eyes, skin and respiratory tract and affect the nervous system and degrease the skin. Risk of serious damage to eyes.

FIRST AID TREATMENT

- Remove the person from the exposure area to fresh air immediately. If breathing has stopped, perform mechanical artificial respiration.
- **Skin contact:** Remove contaminated clothing and shoes immediately. Wash affected area with non-abrasive soap or mild detergent and large amounts of water. Get medical attention if necessary.
- **Eye contact:** Wash eyes immediately with large amounts of water or normal saline, occasionally lifting upper and lower lids, (approximately 15 to 20 minutes). Get medical attention if necessary.
- **Ingestion:** **Get medical attention immediately.** Let the person flush his/her mouth with clean water if conscious. Due to the aromatic solvent, **do not induce vomiting.** Never give anything per mouth if the person is unconscious. Remove product by gastric lavage and catharsis. Do not perform gastric lavage if the victim is unconscious. Administration of gastric lavage or oxygen should be performed by qualified medical personnel. Give oxygen if respiration is depressed.

NOTE TO PHYSICIAN

No specific antidote available. Treat symptomatically and supportively.

RESISTANCE WARNING

ALACHLOR 384 EC is a group code K3 herbicide. Any weed population may contain individuals naturally resistant to **ALACHLOR 384 EC** and other group code K3 herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds may not be controlled by **ALACHLOR 384 EC** or any other group code K3 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.

DIRECTIONS FOR USE: Use only as directed.

General information:

- Ensure the use of accurately calibrated equipment.
- A deep ploughing, just prior to planting is essential for:
 - a) Improved control of *Cyperus esculentus* (Yellow nutsedge). Refer “**VARIABLE WEED CONTROL**” at the end of this label.
 - b) Breaking of compaction layers which could lead to waterlogged soil and subsequent possible damage to maize following heavy rain.
- Prepare a fine even seedbed free of weeds, thrash and clods.
- Do not apply **ALACHLOR 384 EC** to inbred parent plants of maize hybrids, or onto experimental or newly released cultivars, without first referring to the manufacturers or seed suppliers.
- Do not apply to poorly drained soils. Water logging in the presence of herbicides could cause stand reduction and/or stunted growth.
- Do not apply **ALACHLOR 384 EC** to sandy soils which are susceptible to soil erosion.
- Flood irrigation can reduce weed control efficacy.

Compatibility:

- **ALACHLOR 384 EC** can be mixed with **AGRIZINE 500 SC** (L 5387 / W 130121), **MCPA 400 SL**, **2,4-D Amine 480 SL**, **Extend 800 WDG**, **SKOFFEL® 200 SUPER** (L 6328 / W 130059 / N-AR 1097), **Radical 250 EC** and **2,4-D / IOXYNIL**.
- If tank mixtures are performed with other products, small quantities of the products in the correct ratio should be mixed with the appropriate quantity of water, to determine compatibility.
- Water quality and formulation of other products may influence compatibility.
- Use restrictions for any herbicides used in combination with **ALACHLOR 384 EC**, must be adhered to.

Mixing instructions:

- Shake the container well before use. Close the container well after use.
- Half fill the spray tank with clean water, then add the required amount of **ALACHLOR 384 EC** while maintaining agitation. Then complete the filling operation.
- When mixing **ALACHLOR 384 EC** with other herbicides, use the following procedure:
 - a) Fill the spray tank three quarters with clean water. Add the required amount of the complementary herbicide to the water, agitating continuously.
 - b) Continue filling the spray tank with water and add the required amount of **ALACHLOR 384 EC** just before the tank is filled to its full level.
 - c) Ensure thorough agitation of the mixture in the tank during mixture and spraying.
 - d) Tank mixtures must be sprayed out immediately and not allowed to stand in the spray tank overnight.
 - e) Thoroughly flush out spraying equipment at the end of the spraying operation.

Application:

- Apply **ALACHLOR 384 EC** or its tank mixtures preferably with planting or immediately after planting, but not later than 2 days after planting. Use 200 litres spray mixture per hectare for overall ground application and 30 to 40 litres per hectare for aerial application.
- 10 to 15 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 must be performed in the same direction the rows are planted, to assist maize 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 seed at planting, to promote vigorous seedling growth.
- Ensure the equipment is accurately calibrated and regularly checked before and during the spraying operation.

Aerial application:

Aerial application of **ALACHLOR 384 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:

- Volume: A spray mixture volume of **Pre-emergence** - 30 litres per hectare is recommended and **Post-emergence** - 30 to 35 litres per hectare. 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: The following number of droplets per cm² must be recovered at the target area: **Pre-emergence** - 20 to 30 and **Post-emergence** - 35 to 45.
- Droplet size: The following droplet spectra are recommended: **Pre-emergence** - VMD of 350 to 400 micron and **Post-emergence** - VMD of 300 to 350 micron. 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 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

A. MAIZE

Pre-emergence to crops and weeds:

Application to be performed at planting or not later than 2 days after planting (using the correct rates for different row and band widths). To increase the spectrum of broadleaf weeds controlled (in maize only), tank mixtures with **Agrizine 500 SC** are recommended.

Soil Clay	ALACHLOR 384 EC	Agrizine 500 SC	Remarks
0 to 10 %	4 ℓ *	1.75 to 2.25 ℓ	When short soil persistence is required in view of follow-up crops, use only 1.5 litres per hectare Agrizine 500 SC on soil up to 35 % clay and 2 litres per hectare on soils over 35 % clay. (Refer "NOTE" below).
11 to 16 %	4 ℓ *	2.5 ℓ	
17 to 20 %	4.5 ℓ	2.75 ℓ	
21 to 35 %	5 ℓ	2.75 to 3.25 ℓ	
> 35 %	5 ℓ	4.0 ℓ	

NOTE

* - On soil of 0 to 10 % clay in the western Transvaal and northern Orange Free State, use the recommendations below.

For specific annual grass and broad-leaved weed control in maize:

For use on soils of 0 to 20 % clay only (including soils of 0 to 10 % clay in the western Transvaal and northern Orange Free State). Apply the required **ALACHLOR 384 EC** rate post planting of the crop and pre-emergence of the crop and weeds, either in a tank mix with required **Agrizine 500 SC** rate or alone, followed by **Agrizine 500 SC** applied early post-emergence of the weeds, according to the manufacturer's label recommendations.

ALACHLOR 384 EC	Agrizine 500 SC	Weed Species
2.0 ℓ / ha *	2.5 to 3.25 ℓ / ha	<i>Eleusine indica</i> (Goose grass). Depending on soil type; <i>Chloris virgata</i> (Feather-top Chloris).
3.0 ℓ / ha *	2.5 to 3.25 ℓ / ha	** <i>Digitaria sanguinalis</i> (Crabfinger-grass). Depending on soil type; <i>Urochloa panicoides</i> (Garden Urochloa) & <i>Panicum schinzii</i> (Sweet buffalo grass).

* - Nutsedges (*Cyperus esculentus*) will not be controlled at these rates.

** - In areas of known high *Digitaria sanguinalis* infestations, it is recommended to use **ALACHLOR 384 EC** at 4.0 to 5.0 litres per hectare in a tank mix with **Agrizine 500 SC** as recommended (excluding soils of 0 to 10 % clay in the western Transvaal and northern Orange Free State). For use on soils over 20 % clay use **ALACHLOR 384 EC** at 5.0 litres per hectare as recommended above.

For extended weed control in EPTC PLUS 720 EC (L 4505 / N-AR 1095) treated maize:

Apply **EPTC Plus 720 EC** according to the manufacturer's recommendations. Apply **ALACHLOR 384 EC** at 3.0 litres per hectare or at 3.0 litres per hectare in a tank mix with **Agrizine 500 SC**, according to the above recommendations up to 4 weeks after planting the maize. Emerged weeds should be destroyed with a shallow cultivation (less than 3 cm deep) prior to the **ALACHLOR 384 EC** or **ALACHLOR 384 EC** plus **Agrizine 500 SC** treatment. Where the crop has emerged, spraying should be directed between the crop rows and not over the crop. Do not apply the **ALACHLOR 384 EC** treatment in under 200 litres water per hectare nor by aircraft.

NOTE

Agrizine 500 SC, tank mixed with **ALACHLOR 384 EC**, results in soil persistent residues. Do not plant **Atrazine** susceptible crops, before the time stated on the **Agrizine 500 SC** label has expired. However, if the rate of **Agrizine 500 SC** used is 1.5 litres per hectare, the waiting period is only 6 months and if 2.0 litres

per hectare is used the waiting period is 9 months for the following crops: Grain sorghum, Feed sorghum, Potatoes, Sunflowers, Dry beans, Groundnuts, Soybeans and Cereals.

If **ALACHLOR 384 EC** plus **Agrizine 500 SC** tank mixtures are applied onto turf soils (soils which expand when wet and crack and crumble when dry), than the **Agrizine 500 SC** may remain active much longer in the soil than the above-mentioned waiting periods. Do not use **ALACHLOR 384 EC** plus **Agrizine 500 SC** mixtures on these soils if it is anticipated that an **Atrazine** sensitive crop is to be planted in rotation.

B. POTATOES

Pre-emergence in respect of weeds:

Apply 4.0 to 5.0 litres per hectare, unless irrigated, apply pre-emergence to potatoes and weeds, after the first summer rains. Use the lower dosage on light soils (0 to 16 % clay).

Early post emergence in respect of weeds:

ALACHLOR 384 EC is a pre-emergence herbicide. However, for early post weed emergence application after the first summer rains (unless irrigated), add **Skoffel® 200 Super** at 1 to 2 litres per hectare. **ALACHLOR 384 EC** and **Skoffel® 200 Super** mixtures **must not** be applied after 10 % potato emergence.

C. GROUNDNUTS AND SOYBEANS

Pre-emergence of weeds and crop:

Apply 4.0 to 5.0 litres per hectare. Application to be performed at planting, or not later than 2 days after planting. Use the lower dosage on light soils (0 to 16 % clay).

D. SUNFLOWERS

- Apply pre-emergence of weeds and crop at 4.0 to 5.0 litres per hectare, depending on soil type. Use the lower dosage on light soils (0 to 16 % clay).
- **ALACHLOR 384 EC** in tank mixture with **Radical 240 EC** applied pre-emergence in Sunflowers:

Soil Type & % Clay	ALACHLOR 384 EC l / ha	Radical 250 EC l / ha
5 to 20	2.0	1.0
> 20	3.0	1.25

REMARKS
Do not use Radical 250 EC:
 - in seed, birdseed or confectionary type sunflowers.
 - on sunflowers which have been planted in very shallow soil.

E. TRANSPLANTED CABBAGE, BROCCOLI (LATE CORONA AND PREMIUM CROP) AND BRUSSELS SPROUTS (JADE CROSS)

Pre-emergence of weeds:

Apply as soon as possible after the first post-transplant irrigation 4.0 to 5.0 litres per hectare. Use the lower dosage on light soils (0 to 16 % clay).

F. SUGARCANE

Pre-emergence in respect of weeds - plant and ratoon cane:

Apply 5.0 to 6.0 litres per hectare if *Panicum maximum* (from seed only) is expected to be a major problem, use the higher rate.

For the control of a broad spectrum (broad-leaved weeds and annual grasses), **MCPA 400 SL, 2,4-D Amine 480 SL** or **Agrazine 500 SC** can be added to above rates of **ALACHLOR 384 EC** as follows:

Product	Dosage rate	Soil Type
MCPA 400 SL	4.0 ℓ / ha	All soils
2,4-D Amine 480 SL	4.0 ℓ / ha	All soils
Agrazine 500 SC	2.0 ℓ / ha	Sandy to sandy clay loams (up to 35 % clay)
Agrazine 500 SC	3.0 ℓ / ha	Sandy to heavier clays (above 35 % clay)

Early post emergence in respect of weeds:

ALACHLOR 384 EC combinations for plant and ratoon cane per hectare.

ALACHLOR 384 EC Rate	In Combination with
5 to 6 ℓ	PLUS 2.5 kg Extend 800 WDG PLUS 1.25 ℓ 2,4-D/ioxynil **
5 to 6 ℓ	PLUS 4 ℓ 2,4-D Amine 480 SL PLUS 1 to 2 ℓ Skoffel® 200 Super*
5 to 6 ℓ	PLUS 2 to 3 ℓ Agrazine 500 SC PLUS 1 to 2 ℓ Skoffel® 200 Super*

* - Apply **Skoffel® 200 Super** before the second leaf has unfurled.

** - The **ALACHLOR 384 EC** plus **Extend 800 WDG** plus **2,4-D/ioxynil** combination provides control of *Cyperus esculentus*, annual grasses and broad-leaved weeds.

WEEDS CONTROLLED BY ALACHLOR 384 EC:	
<i>Amaranthus hybridus</i>	Cape pigweed
<i>Amaranthus spinosus</i>	Thorny pigweed
<i>Amaranthus thunbergii</i>	Red pigweed
<i>Brachiaria eruciformis</i>	Sweet signal grass
<i>Chloris virgata</i>	Feather-top Chloris
<i>Digitaria sanguinalis</i>	Crabfinger-grass
<i>Echinochloa crusgalli</i>	Barnyard grass
<i>Eleusine indica</i>	Goose grass
<i>Galinsoga parviflora</i>	Small-flowered quick weed
<i>Panicum maximum</i>	Common buffalo grass
<i>Panicum schinzii</i>	Sweet buffalo grass
<i>Portulaca oleracea</i>	Purslane
<i>Setaria pallide-fusca</i>	Horse grass
<i>Setaria verticillata</i>	Bur bristle grass
<i>Sonchus oleraceus</i>	Sowthistle
<i>Tragus racemosus</i>	Large carrotseed grass
<i>Urochloa panicoides</i>	Garden Urochloa
VARIABLE WEED CONTROL:	
<i>Anthemis cotula</i>	Stink mayweed
<i>Bidens formosa</i>	Cosmos
<i>Chenopodium album</i>	White goosefoot
<i>Chenopodium carinatum</i>	Green goosefoot
<i>Cleome monophylla</i>	Single-leaved Cleome
<i>Commelina benghalensis</i>	Wandering Jew
<i>Cyperus esculentus</i>	Yellow nutsedge
<i>Datura ferox</i>	Large thorn apple
<i>Datura stramonium</i>	Thorn apple
<i>Stellaria media</i>	Chickweed (Starwort)
<i>Tagetes minuta</i>	Tall khaki weed

NOTE

1. The control of Yellow nutsedge (*Cyperus esculentus*) is dependent on a deep ploughing immediately before planting and application 1 to 2 days after planting, followed by about 12 mm rain within 7 to 10 days.
2. The addition of **Agrizine 500 SC** at the recommended rate to **ALACHLOR 384 EC** will provide control of the following weeds in addition to the weeds listed under “**VARIABLE WEED CONTROL**”: Blackjack (*Bidens pilosa*) and Dwarf marigold (*Schkuhria pinnata*).
3. Late germinating Thorn apple (*Datura* spp.) and Tall khaki weed (*Tagetes minuta*) as well as Cocklebur (*Xanthium strumarium*), might not be controlled by **ALACHLOR 384 EC** plus **Agrizine 500 SC** mixtures.

Consult the **Agrizine 500 SC, Extend 800 WDG, Radical 250 EC, Skoffel® 200 Super, MCPA 400 SL, 2,4-D Amine 480 SL, EPTC Plus 720 EC** labels for **WARNINGS, PRECAUTIONS** and **DIRECTIONS FOR USE**.

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

- **EXTEND 800 WDG** (L 9108 / W 1301047) = **DEVELOP 800 WDG** (L 9109) (**Diuron**)
- **MCPA 400 SL** (L 5793 / N-AR 1092) = **MCPA 400 SL** (L 5795 / W 130452),
- **2,4-D AMINE 480 SL** (L 4505 / W 130459 / N-AR 1096) = **AMINO 480 SL** (L 8034) = **2,4-D AMINE SL** (L 8145) and
- **RADICAL 250 EC** (L 9159) = **RAPID 250 EC** (L 9160) (**Flurochloridone**).

MCPA 400 SL, AMINO 480 SL, DEVELOP 800 WDG and/en **RAPID 250 EC** are registered products of / is
geregistreerde produkte van
VILLA CROP PROTECTION (PTY) LTD.

SKOFFEL® 200 SUPER is a registered trademark of / is 'n geregistreerde handelsmerk van
UNIVERSAL CROP PROTECTION (PTY) LTD.

2,4-D AMINE 480 SL, EXTEND 800 WDG, MCPA 400 SL, RADICAL 250 EC and/en **EPTC PLUS 720 EC**
are registered products of / is geregistreerde produkte van
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2,4-D AMINE SL is a registered product of / is 'n geregistreerde produk van
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