Acetochlor 700 EC

South Africa Reg. No: L 10098 Act/Wet No. 36 of/van 1947

An emulsifiable concentrate herbicide with added safener for the pre-emergence control of annual grasses and certain broadleaf weeds in maize, sweet corn, potatoes, sugar cane and groundnuts.

ACTIVE INGREDIENT

Acetochlor (α-Chloroacetamides)	700 g/ℓ
Dichlormid (safener)	93 g/ℓ

GROUP 15 HERBICIDE

CAUTION

HAZARD STATEMENTS: Flammable liquid and vapour | Causes skin irritations | May cause an allergic skin reaction | Causes serious eye damage | Harmful if inhaled | May cause respiratory irritation.

PRECAUTIONARY STATEMENTS: Obtain special instruction before use. Do not handle until all safety precautions have been read and understood.

Registration holder: Green Island Investments (Pty) Ltd.
Co. Reg. No.: 2013/043963/07
P.O. Box 1822, Heidelberg 1438, South Africa
Tel: 078 737 9236

Distributed by: Typhoon Plant Protection (Pty) Ltd.
Co. Reg. No.: 1998/006156/07, C/O Farm Vlakfontein
Corner of the R23 Benoni Road & R550 Nigel Road
Brakpan District, Heidelberg 1438, Gauteng, South Africa
Tel: 078 737 9236

24 HR EMERGENCY NUMBERS
Griffon Poison Information Centre: +27 82 446 8946
24 Hr Transport / Spill emergency no:
(Hazcall24) +27 86 044 4411 (Typhoon Plant Protection)

Net Volume: ℓ

Expiry Date:
Batch No:
Date of Manufacture:
U.N. No. 3082

Typhoon
PLANT PROTECTION

READ LABEL IN DETAIL BEFORE OPENING THE CONTAINER. FOR FULL PARTICULARS, SEE ENCLOSED LEAFLET. KEEP OUT OF REACH OF CHILDREN AND ANIMALS.

WARNINGS:

HAZARD STATEMENTS:
- Flammable liquid and vapour.
- Causes skin irritations.
- May cause an allergic skin reaction.
- Causes serious eye damage.
- Harmful if inhaled.
- May cause respiratory irritation.
- Suspected of causing cancer.
- If Suspected of damaging fertility.
- Very toxic to aquatic life with long lasting effects.
- May cause damage to organs through prolonged or repeated exposure.

- Handle with care.
- Harmful when swallowed, inhaled or absorbed through the skin.
- May cause eye irritation.
- Toxic to fish and aquatic organisms.
- Store in a cool, dry and well-ventilated place in the original container, tightly closed and secured.
- Store away from food, feeds, seed, fertilizer 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.

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 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 soil, climatic and storage conditions; quality of dilution water, incompatibility 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.

WARNINGS:

PRECAUTIONARY STATEMENTS:
- **Do not** eat, drink or smoke while handling this product.
- Avoid contamination of food, feeds, drinking water and eating utensils.

For safety when mixing:
- Wear eye protection e.g. face shield. If you get **ACETOCHLOR 700 EC** in your eyes flush it out at once.
- Wear rubber gloves. If you get it on your skin wash it off at once.
- If you spill it on your clothes change and wash the contaminated clothing.
- Triple rinse empty containers in the following manner: Invert the empty container over the spray or mixing tank and allow to drain 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 10 % of that of the container. Add the rinsings to the contents of the spray tank before destroying the container in the described manner.

For safety when spraying:
- Avoid contact with the spray.
- Avoid spray drift onto other crops, grazing, rivers, dams and areas not under treatment.

For safety after spraying:
- Clean application thoroughly after use and dispose of wash water where it will not contaminate crops, grazing, rivers or dams.
- Destroy empty container and **Do not** use for any other purpose.
- Change and wash your work clothes.
- Wash yourself.

Relevant substance:
Substance/Mixture: Mixture Ingredients:

Substance name (IUPAC)	CAS – No. EC-No.	Concentration % By weight
Acetochlor	34256-82-1 251-899-3	60-70%
Dichlormid	37764-25-3 253-658-8	1-10%
Calcium dodecylbenzene sulphonate	90194-26-6 290-635-1	1-5%
Solvent Oil A100	78-83-1	10-20%

FIRST AID TREATMENT
- **Skin contact:** Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. Obtain medical attention if irritation persists.
- **Eye contact:** 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.
- **Inhalation:** Remove person from contaminated area to fresh air and assist breathing as needed. Seek medical attention if irritation occurs. **Seek medical attention if you feel unwell after inhalation**.
- **Ingestion:** Seek medical attention or call a poison control centre for treatment advice. **Do not induce vomiting** unless instructed to do so by a poison control centre or doctor. **Do not** give anything by mouth to an unconscious person. If the person is alert, rinse mouth thoroughly with water.

NOTE TO PHYSICIAN

No specific antidote. Treat symptomatically and supportively. Keep patient under observation. Perform gastric lavage and catharsis if the victim is not unconscious. If less than 10 mg per kg body weight was ingested, administer 30 to 60 g activated charcoal in 150 to 300 ml water.

USE RESTRICTIONS:

- **Do not** use **ACETOCHLOR 700 EC** on inbred parent lines of maize hybrids or experimental or newly release cultivars without first consulting with your chemical supplier or with the seed company concerned.
- **Do not** use **ACETOCHLOR 700 EC** on poorly drained soils or soils with a compaction layer as under these conditions waterlogging can occur and the herbicide may cause crop injury.
- When tank mixing other herbicides with **ACETOCHLOR 700 EC** the restrictions and warnings on the labels of the herbicides concerned must be adhered to.
  Refer to **ATRASIEN 500 SC** (Reg. no.: L 10074) label.

RESISTANCE WARNING:

ACETOCHLOR 700 EC is a **Group code K3 herbicide**. Any weed population may contain individuals naturally resistant to **ACETOCHLOR 700 EC** and any 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 **ACETOCHLOR 700 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 indicated:

Compatibility:

- No known cases of incompatibility with other agricultural chemicals have yet been reported.
- If tank mixtures are desired, first mix small quantities of the chemicals separately in water then add these together whilst stirring and check for any signs of incompatibility e.g. flocculation etc., before making mixtures in spray tank.

Mixing Instructions:

- Half fill the spray tank with clean water then add the required amount of **ACETOCHLOR 700 EC** and stir thoroughly.
- When using tank mixtures, mix the required volume of chemicals to be tank mixed with a little water before adding to the spray tank.
- Then fill the spray tank to the correct volume with water whilst stirring.
- **Do not** mix the products as concentrates.
- Ensure thorough agitation before and during spraying.

Application:

- **ACETOCHLOR 700 EC** can be applied by means of a tractor drawn boom sprayer or equivalent equipment fitted with a choice and arrangement of fan-type spray nozzles ensuring even distribution and good recovery of spray mixture onto the soil.

- Apply in at least 200 litre water per hectare.
- **ACETOCHLOR 700 EC** must ideally be applied immediately following planting but not later than 5 days after planting.
- Continual rain or sprinkler irrigation of at least 15 mm is needed after application to leach the chemical into the soil where weed seeds germinate. If, however, rainfall does not occur in time and weeds begin to emerge and develop a shallow cultivation must be carried out to destroy these weeds and to mix the herbicide with the upper 10 to 20 mm of soil.
- To ensure good weed control the seedbed must be fine, firm and free of any existing weed growth or excessive crop residues prior to application.

Aerial application:
Aerial application of **ACETOCHLOR 700 EC** plus **ATRASIEN 500 SC** 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 volume of 30 litres per hectare is recommended for **pre-emergence** and 30 to 35 litres per hectare for **post-emergence**. 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:** 20 to 30 droplets per cm2 must be recovered at the target area, when applied **pre-emergence** and 35 to 45 droplets per cm2 when applied **post-emergence**.
- **Droplet size:** A droplet spectrum with a VMD of 350 to 400 microns is recommended, when applied **pre-emergence** and 300 to 350 microns when applied **post-emergence**. Limit the production of fine droplets less than 150 microns (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/h.
- 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:
1. MAIZE and SWEET CORN:

% CLAY	DOSAGE RATE ACETOCHLOR 700 EC (ℓ/ha)	REMARKS
0 – 10	0,7 – 1,7 ℓ	Use the lower dosage rate if a short period of weed control is required between application and a cultivation and/or a follow-up application. The higher rates must be used in cases of high grass pressure and/or the suppression of yellow nutsedge.
11 – 15	0,9 – 2,1 ℓ	
16 – 20	1,1 – 2,1 ℓ	
21 – 30	1,4 – 2,4 ℓ	
31 – 40	1,7 – 2,7 ℓ	
41 – 55	2,7 ℓ	

NOTE: Maize and Sweet corn:
Low temperatures and/or heavy prolonged rains soon after planting may cause herbicide damage to the crop such as reduced germination, stunting, etc. These symptoms can be aggravated when seed is planted too deep. Seed smaller than 4 flat have a higher risk for damage.

2. MAIZE (tank mixture applications):

2.1 Broadleaf weeds and grasses will be controlled and yellow nutsedge will be conditionally controlled with tank mixtures of **ACETOCHLOR 700 EC** plus **ATRASIEN 500 SC** as follows:

% CLAY	DOSAGE RATE (ℓ/ha)	
	ACETOCHLOR 700 EC +	ATRASIEN 500 SC
0 – 10	0,7 – 1,7 ℓ	2,5 ℓ
11 – 15	0,9 – 2,1 ℓ	3,25 ℓ
16 – 20	1,1 – 2,1 ℓ	3,25 ℓ
21 – 30	1,4 – 2,4 ℓ	4,0 ℓ
31 – 40	1,7 – 2,7 ℓ	4,75 ℓ
41 – 55	2,7 ℓ	5,0 ℓ

For full particulars and list of weeds controlled consult the **ATRASIEN 500 SC** label.

Remarks:
- Use the higher application rate of **ACETOCHLOR 700 EC** if conditional yellow nutsedge control is required. For conditions refer to list of weeds variably controlled.
- Use the higher application rate of **ACETOCHLOR 700 EC** under conditions of high grass pressure (especially crab finger grass) in regions with high rainfall.

2.2 Northern and Western Free State and North West Province only. Broadleaf weeds and grasses will be controlled with a tank mixture of **ACETOCHLOR 700 EC** plus **ATRASIEN 500 SC** as follows:

% CLAY	DOSAGE RATE (ℓ/ha)		REMARKS
	ACETOCHLOR 700 EC + ATRASIEN 500 SC		
0 – 10	0,7	2,25 ℓ	Yellow nutsedge *(Cyperus esculentus)* control not be satisfactory.
11 – 15	0,9	2,25 ℓ	
16 – 20	1,1	2,5 ℓ	Thorn apple species *(Datura spp*) as well as khaki weed *(Tagetes minuta)* may not be controlled season long.
21 – 30	1,4	2,75 ℓ	

NOTE:

- In some cases it is the preferred practice to pre-plant, incorporate a thiocarbamate herbicide and thereafter to apply, post-emergence to the crop, tank mixtures.
- The aforementioned tank mixtures of **ACETOCHLOR 700 EC** may be used in such cases provided that **ACETOCHLOR 700 EC** is only sprayed pre-emergence to the weeds as it possesses no post-emergence herbicidal activity.
- It is recommended that such applications are not made later than the 5-leaf stage of the maize as the leaves of the crop may prevent the spray mixture from reaching the soil.
- Consult the **ATRASIEN 500 SC** label with regard to recommendations, use restrictions, waiting periods for follow up crops, list of weeds controlled, etc.

3. GROUNDNUTS:

% CLAY	DOSAGE RATE ACETOCHLOR 700 EC (ℓ/ha)	REMARKS
0 – 10	1,0 – 2,1 ℓ	Use the higher rates if longer and better control of broadleaves and yellow nutsedge is required.
11 – 30	1,4 – 4,1 ℓ	

4. SUGAR CANE:

% CLAY	DOSAGE RATE ACETOCHLOR 700 EC (ℓ/ha)	REMARKS
0 – 35	2,7 ℓ	**ACETOCHLOR 700 EC** should be tank mixed with the following broadleaf herbicides as listed below.
> 35	4,1 ℓ	

Tank mixtures:
DIURON 800 SC: Use 3 litre per hectare pre-emergence.
ATRASIEN 500 SC: Use 2 to 3 litre per hectare pre-emergence only. Use the lower rate on soils with up to 35% clay and the higher rate on heavier soils.

5. POTATOES:

% CLAY	DOSAGE RATE ACETOCHLOR 700 EC (ℓ/ha)	REMARKS
0 – 10	0,9	Apply under irrigation only.
11 – 20	1,9	
21 – 30	2,1	
> 30	3,9	

NOTE:
Cold conditions after an **ACETOCHLOR 700 EC** application might cause crop injury.

WEED CONTROL:
- Refer to list of weeds controlled below.
- The control of yellow nutsedge as well as some broadleaf weeds may be variable depending on favourable conditions. Refer to list of variable weed control for specific information.
- To increase the spectrum of broadleaf weeds controlled it is recommended that either tank mixtures or follow up application of standard registered broadleaf herbicides are used in combination with **ACETOCHLOR 700 EC**, in accordance with the manufacturer's label recommendations.

List of weeds controlled by ACETOCHLOR 700 EC:

ANNUAL GRASSES:

Chloris virgata	Feathertop Chloris
Digitaria sanquinalis	Crab fingergrass
Eleusine indica subsp. africana	Goose grass
Panicum schinzii	Sweet buffalo grass
Setaria verticillata	Sticky bristle grass
Urochloa panicoides	Herringbone grass

ANNUAL BROADLEAF WEEDS:

Amaranthus hybridus	Cape pigweed
Amaranthus spinosus	Thorny pigweed
Chenopodium album	White goosefoot
Commelina benghalensis	Benghal wandering Jew
Galinsoga parviflora	Gallant Soldier
Portulaca oleracea	Purslane
Tagetes minuta	Khakiweed

CONTROL OF THE FOLLOWING WEEDS IS VARIABLE:

Cyperus esculentus	Yellow Nutsedge
Cleome monophylla	Spindlepod

NOTE:

Cyperus esculentus control may only be achieved under the following conditions:

- Planting into a fine and firm seedbed must be directly preceded by a deep mouldboard ploughing, spraying must take place within 2 days after planting and sufficient continual soaking rain (at least 15 mm on light soils and 25 mm on heavy soils) has to occur before the yellow nutsedge plants start to germinate and develop.