**Sales panel**

# CALIBRE® SC

Reg. No./Nr L7607, Act No./Wet Nr. 36 of/van 1947
Malawi Reg. No. MW/PCB/2019/0973

**READ THE LABEL BEFORE USE**
**KEEP OUT OF REACH OF CHILDREN AND ANIMALS**

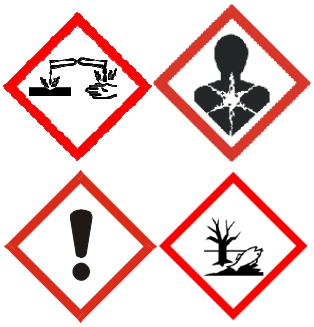
| | | |
|---|---|---|
| A suspension concentrate herbicide for pre and early post-emergence control of certain annual grass and broadleaf weeds in maize. | | 'n Suspensie konsentraat onkruiddoder vir voor- en na-opkom beheer van sekere eenjarige gras- en breëblaaronkruide in mielies. |

| GROUPS/GROEPE | 5 | 15 | HERBICIDE/ONKRUIDDODER |
|---|---|---|---|

**ACTIVE INGREDIENTS:** **AKTIEWE BESTANDDELE:**

Acetochlor (chloroacetanilide) . . . . . ..350 g/ℓ. ... . . . . Asetochloor (chloorasetanilied)
Atrazine (triazine) . . . . . .. .175 g/ℓ. . . . . . . . . . . .Atrasien (triasien)
Terbuthylazine (triazine) . . . . . 175 g/ℓ. . . . . Terbutielasien (triasien)
Dichlormid (safener)..... 48 g/ℓ.....Diklormied (beveiliger)

**Net volume** **ℓ** **Netto volume**



**DANGER**

**GHS Hazard Statements**
Causes skin irritation.
Causes serious eye damage.
May cause an allergic skin reaction.
May cause respiratory irritation.
Suspected of causing cancer.
Suspected of damaging fertility.
May cause damage to the kidneys through prolonged or repeated exposure if inhaled.
Very toxic to aquatic life with long lasting effects.
May cause damage to organs through prolonged or repeated exposure.
Very toxic to aquatic life with long lasting effects.

**GHS Precautionary Statements**
Do not handle until all safety precautions have been read and understood.
Do not breathe mist, vapours or spray.

AECI® PLANT HEALTH

**REGISTRATION HOLDER / REGISTRASIEHOUER:**

**AECI® Limited / AECI® Beperk**
Reg. No. / Nr. 1924/002590/06
P.O. Box / Posbus 14418
Witfield, 1467
Tel : (011) 823 8000
www.aeciph.com; www.aeciworld.com
IN CASE OF POISONING PLEASE PHONE / IN GEVAL VAN VERGIFTIGING SKAKEL ;
0861 555777 / 082 446 8946 / Spill Tech 086 100 0366 (a/h)

**CALIBRE® SC** is a registered trademark of AECI® Limited/'n geregistreerde handelsmerk van AECI® Beperk

**Batch No:** **Lotnommer:**
**DATE OF MANUFACTURE :** **VERVAARDIGINGSDATUM:**

**UN No. / VN Nr. 3082** Environmentally hazardous substance, liquid, n.o.s. (Atrazine, terbuthylazine)

**Pamphlet**

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Malawi Reg. No. MW/PCB/2019/0973

**READ THE LABEL BEFORE USE**
**KEEP OUT OF REACH OF CHILDREN AND ANIMALS**

A suspension concentrate herbicide for pre and early post-emergence control of certain annual grass and broadleaf weeds in maize.

| GROUPS | 5 | 15 | HERBICIDE |
|---|---|---|---|

**ACTIVE INGREDIENTS:**
Acetochlor (chloroacetanilide) . . . . . ..350 g/ℓ
Atrazine (triazine) . . . . . .175 g/ℓ
Terbuthylazine (triazine) . . . . . 175 g/ℓ
Dichlormid (safener)..... 48 g/ℓ



**DANGER**

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## WARNINGS:

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May cause an allergic skin reaction.
May cause respiratory irritation.
Suspected of causing cancer.
Suspected of damaging fertility.
May cause damage to the kidneys through prolonged or repeated exposure if inhaled.
Very toxic to aquatic life with long lasting effects.
May cause damage to organs through prolonged or repeated exposure.
Very toxic to aquatic life with long lasting effects.

Poisonous when swallowed.
Store in a cool place, away from food, feeds, seed or other agricultural remedies.
Keep out of reach of children, uninformed persons and animals.
Re-entry – Do not enter treated area within one day after treatment unless wearing protective clothing. In case of poisoning – CALL A DOCTOR 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 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 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 THE EVENT OF ANY UNCERTAINTY.**

## PRECAUTIONS:

**GHS Precautionary Statements**
Obtain special instruction before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe mist, vapours or spray. Wash thoroughly after handling.
Wear protective gloves, protective clothing, eye protection & face protection.
IF ON SKIN: Wash with plenty of water.
If skin irritation or rash occurs: Get medical attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF SWALLOWED: Call a POISON CENTRE or doctor/ physician if you feel unwell.

Do not eat, drink or smoke whilst mixing or applying or before washing hands and face and changing clothes.
Do not mix and load within at least 15 m from boreholes, streams, rivers and dams.
Do not apply within at least 15 m from boreholes, streams and rivers.
Do not apply within at least 60 m from dams.
Ensure that no back siphoning to boreholes or dams takes place when the product is applied through the irrigation system.
Prevent contamination of food, feed, drinking water and eating utensils.
Prevent spray drift onto other crops, grazing, rivers, dams or other areas not under treatment.
Clean applicator thoroughly before re-using and dispose of wash water where it will not contaminate crops, grazing, rivers and dams.
Triple rinse the empty container: Invert the empty container over the spray or mixing tank and drain for at least 30 seconds after the flow has slowed down to dripping. Thereafter rinse the empty container three times in succession with one quarter of the container volume fresh water and decant the rinsate into the spray or mixing tank. Puncture the triple rinsed container and dispose of via an approved collector or recycler (www.croplife.co.za). Do not bury, burn or donate the container to any other parties that may use it as a container for food or beverages.

**RELEVANT SUBSTANCES:**

| Substance name (IUPAC/EC) | Concentration % by weight | Classification EC1272/2008 |
|---|---|---|
| Acetochlor | 30-40% | Skin irritation (Category 2) H315. Skin sensitization (Category 1) H317. Acute toxicity inhalation (Category 4) H332. Carcinogenicity (Category 2) H351. Reproductive toxicity (Category 2) H361 f. STOT RE 2 H373 (kidney). STOT SE 3 H335. Aquatic acute 1 H400 (M=1000). Aquatic chronic 1 H410 (M=100). |
| Atrazine | 10-20% | Skin sensitizer (Category 1) H317. STOT RE 2 H373. Aquatic acute 1 H400. Aquatic chronic 1 H410. |
| Terbuthylazine | 10-20% | Acute toxicity oral (Category 4) H302. Aquatic acute 1 H400. Aquatic chronic 1 H410. |
| Ethylene glycol mono | 1-10% | Acute toxicity oral (Category 4) H302. |
| Calcium dodecylbenzene sulphonate | 1-5% | Skin irritant (Category 2) H315. Serious eye damage (Category 1) H318. |
| Dichlormid | 1-5% | Skin irritant (Category 2) H315. |

**NOTE:** The other ingredients not included above, do not cause or contribute towards the correct GHS classification of **CALIBRE SC** and are therefore, in terms of the South African Regulations for Hazardous Chemical Agents - 2021; Regulation 14(b), not listed.

**FIRST AID:**

**In case of inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if you feel unwell.
**In case of skin contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately if skin irritation persists.
**In case of eye contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.
**In case of ingestion:** Immediately transfer patient to nearest hospital or medical centre, warning by telephone of the estimated arrival time so that the start of treatment is not delayed. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband.

## NOTE TO PHYSICIAN:

If large quantities have been absorbed, gastric lavage may be necessary. Treat symptomatically.

## USE RESTRICTIONS:

To avoid damage to follow-up crops the following waiting periods must be adhered to:

| | |
|---|---|
| **MAIZE AND SUGARCANE** | **NONE** |
| **GRAIN SORGHUM** | **12 MONTHS** |
| **DRY BEANS, FODDER SORGHUM, GROUNDNUTS, POTATOES, SMALL GRAINS, SOYBEANS AND SUNFLOWERS** | **18 MONTHS** |
| **ALL OTHER CROPS (**A TEST PLANTING IS RECOMMENDED**)** | **24 MONTHS** |

Except at all other crops the waiting period can be reduced to 9 months if the rate of application is less than 1.0 kg a.i of triazines. When using **CALIBRE SC** the amount of active triazines applied per hectare should be calculated as follows: 1 litre **CALIBRE SC** contains 0.175 kg active ingredient (a.i) atrazine and 0.175 kg active ingredient (a.i) terbuthylazine.
2.3 litres **CALIBRE SC** / ha = 2.3 × ( 0.175 + 0.175 ) = 0.805 kg a.i triazine / ha.
4.5 litres **CALIBRE SC** / ha = 4.5 × ( 0.175 + 0.175 ) = 1.575 kg a.i triazine / ha.

NB: The abovementioned waiting periods are valid only if the correct dosage of **CALIBRE SC,** according to soil type, was applied and normal or above average rainfall occurred after planting / during the season when **CALIBRE SC** was applied.

When applied to soils, which expand on wetting and crack or crumble on drying out as well as soils high in lime content, triazine will remain much longer active in the soil, resulting in longer waiting periods. Poor weed control may also be experienced, when applied pre-emergence.

## RESISTANCE WARNING :

For resistance management, **CALIBRE SC** has been classified as Group Codes 5 & 15 herbicide. Any weed population may contain individuals naturally resistant to **CALIBRE SC** and other Group Codes 5 & 15 herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. The resistant weeds may not be controlled by **CALIBRE SC** or any other Group Codes 5 & 15 herbicides.
To delay herbicide resistance:

- Avoid exclusive repeated use of herbicides from the same herbicide group code. Alternate or tank mix with registered 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.

## MODE OF ACTION:

The mode of action for Acetochlor, is by inhibition of very long chain fatty acid division(VLCFA's)

Atrazine and Terbuthylazine are both photosynthetic electron transport inhibitors at the photosystem II receptor site.

Dichlormid is an herbicide safener that induce synthesis of glutathione S-transferase (GST) isozymes, catalyzing conjugation of the herbicide with the tripeptide glutathione.

## DIRECTIONS FOR USE: USE ONLY AS DIRECTED

Do not apply **CALIBRE SC** to inbred parent plants of maize hybrids nor onto experimental or newly released cultivars without first referring to the registration holder and seed supplier before application.
Flood irrigation can reduce weed control performance.
Optimum pre-emergence weed control is obtained on a fine, even seedbed, free of clods, trash and weeds. However, stubble mulch or minimum tillage conditions may result in inefficient weed control.
Before using **CALIBRE SC** in combination with other herbicides, read the labels and adhere to label recommendations and restrictions. A physical compatibility test should always be carried out prior to application.

The addition of **BLADBUFF 7** / **TECHNIBUFF** to the spray tank is recommended to prevent alkaline hydrolysis.

**MIXING INSTRUCTIONS:**

**SHAKE THE CONTAINER WELL BEFORE USE**

**CLOSE CONTAINER TIGHTLY AFTER USE**

When mixing **CALIBRE SC** with other herbicides or using in a spray program, read the labels of all relevant products and adhere to the manufacturers' recommendations.

When mixing **CALIBRE SC** with other registered herbicides, use the following procedure chronologically:

a) Fill the spray tank three quarters with clean water. Add the required amount of **CALIBRE SC** to the water through a 50 mesh sieve whilst stirring.

b) Ensure thorough agitation of the mixture in the spray tank during mixing and spraying.

c) Tank mixtures must be sprayed out immediately and do not leave prepared spray standing overnight.

d) Thoroughly flush out spraying equipment at the end of the spraying operation.

**APPLICATION METHOD:**

Ensure that spray equipment is accurately calibrated and regularly checked before and during the spraying operation.

10-15 mm rain within 7 – 10 days after application is necessary for good weed control.

**CALIBRE SC** must be applied to a well prepared seedbed without clods, free of developing weeds.

For optimum weed control, seedbed preparation should take place within 3 days before planting, which is followed immediately by the **CALIBRE SC** application. 10 – 15 mm rain or irrigation within 3 days to wash the herbicide into the weed germinating zone, will ensure optimum weed control.

Under dry conditions, weed seedlings may emerge. These are usually stunted and can be controlled with either a shallow cultivation which also mixes the herbicide with the top 10 – 20 mm of soil, or with a recommended post-emergence herbicide treatment.

Heavy rainfall directly after application can result in poor efficacy of the product due to wash away or leaching. In this case a follow-up application after cultivation is recommended.

If soil crusting becomes a problem, rotary harrow not deeper than 10-20 mm in the same direction the rows are planted, to assist with maize germination.

Any mechanical cultivation after application will result in less efficient weed control.

Harrowing after application may reduce weed control if untreated soil is brought into the surface.

Ensure that sufficient fertilizer is placed near the seed at planting, to promote vigorous seedling growth. This is especially important with early planting when the soil temperature is relatively low accompanied with continuous moist conditions.

Use 200 – 300 ℓ / ha total spray volume for an overall ground application.

Dosage rates and spray volumes should be adjusted accordingly for on the row band treatments.

**Ground Application:**

**Pre-emergence (Important):**

Apply **CALIBRE SC** or tank mixtures thereof in maize at planting or immediately after planting. Do not apply later than three days after last cultivation and planting. **Magnum** or **Magnum Super** can be used to control cutworm.

Depending on circumstances, acceptable grass control may only be achieved for up to six weeks after application.

If prolonged weed control is desired and where pre-emergence band application has been done, a follow up application after thorough cultivation is recommended, pre-emergence of the weeds.

**Post-emergence:**

Broadleaf weeds must not be larger than the 4-leaf stage for early post-emergence application. If grasses are present or broadleaf weeds have developed beyond the 4-leaf stage the weeds must first be destroyed by cultivation before the application.

**APPLICATION TABLE:**

| **MAIZE**<br>**Table 1**<br>The control of certain broadleaf weeds and annual grasses where crab-finger grass (*Digitaria sanguinalis)* is a problem. | |
|---|---|
| **% Clay** | **CALIBRE SC ℓ / ha** |
| 0 - 10 | 1.8 – 2.3 |
| 11 – 15 | 2.3 - 2.75 |
| 16 – 20 | 2.75 – 3.25 |
| 21 – 30 | 3.25 – 3.75 |
| 31 – 40 | 3.75 – 4.5 |
| >40 | Not recommended |
| Use the higher dose rate where moderate weed pressure of the following weeds, occur;<br>Large thorn apple (*Datura ferox)*<br>Thorn apple (*Datura stramonium)*<br>Crab-finger grass (*Digitaria sanguinalis)*<br>Khaki weed (*Tagetes minuta)*<br>Light weed pressure of Yellow nutsedge = Yellow Watergrass (*Cyperus esculentus)*. For *Cyperus esculentus*, only suppression will be achieved. | |

| **WEEDS CONTROLLED BY CALIBRE SC** | |
|---|---|
| **Grasses** | |
| Sweet signal grass | *Brachiaria eruciformis* |
| Feather top chloris | *Chloris virgata* |
| Crab-finger grass | *Digitaria sanguinalis*[2] |
| Goose grass | *Eleusine indica => Eleusine coracana* |
| Ubabe = Guineagrass | *Panicum maximum* [1 + 2] |
| Sweet buffalo grass | *Panicum laevifolium => Panicum schinzii* [1 + 2] |
| Red bristle grass | *Setaria pullide-fusca* |
| Sticky bristle grass | *Setaria verticillata* [1+2] |
| Small carrotseed grass | *Tragus berteronianus* [1+2] |
| Large carrotseed grass | *Tragus racemosus* [1+2] |
| Garden grass | *Urochloa brachyuran* [1+2] |
| Bushveld Herringbone grass | *Urochloa mosambicensis* [1+2] |
| Herringbone grass | *Urochloa panicoides* |
| Since **CALIBRE SC** controls annual grasses, other annual grasses that are not listed may be controlled to a greater or lesser degree. However, the registration holder does not accept any liability in respect of the control of unlisted weeds. | |

| Broadleaf weeds | |
|---|---|
| Eight-seeded Prostrate starbur | *Acanthospermum australe* |
| Five-seeded Prostrate starbur | *Acanthospermum glabratum* |
| Upright starbur | *Acanthospermum hispidum* |
| Perennial pigweed | *Amaranthus deflexus* |
| Common pigweed | *Amaranthus hybridus* |
| Thorny pigweed | *Amaranthus spinosus* |
| Red pigweed | *Amaranthus thunbergii* |
| Spanish blackjack | *Bidens bipinnata* |
| Cosmos | *Bidens formosa => Cosmos bipinnatus* [1+2] |
| Blackjack | *Bidens pilosa* |
| White goosefoot | *Chenopodium album* |
| Green goosefoot | *Chenopodium carinatum* |
| Spindlepod | *Cleome monophylla* |
| Pretty lady | *Cleome rubella* |
| Bengal wandering Jew | *Commelina benghalensis*[1+2] |
| Mealie Crotalaria | *Crotalaria sphaerocarpa*[1+2] |
| Striped wild cucumber | *Cucumis myriocarpus*[2] |
| Yellow nutsedge = Yellow watergrass | *Cyperus esculentus*[1+3] |
| Thorn apple (early germinating only) | *Datura* spp[1+2+4] |
| Gallant soldier | *Galinsoga parviflora* |
| Gisekia | *Gisekia pharnaceoides* |
| Kenaf | *Hibiscus cannabinus*[1+2+4] |
| Bladderweed | *Hibiscus trionum* |
| Common morning glory | *Ipomoea purpurea*[1+2+4] |
| Apple of Peru | *Nicandra physaloides* |
| Wild gooseberry | *Physalis angulata* |
| Purslane | *Portulaca oleracea* |
| Tropical Richardia | *Richardia brasiliensis* |
| Dwarf marigold | *Schkuhria pinnata* |
| Sowthistle | *Sonchus oleraceus* |
| Khaki weed | *Tagetes minuta*[1+2] |
| Devils Thorn = Dubbeltjie | *Tribulus terrestris*[1+2+4] |
| Cocklebur | *Xanthium strumarium*[1+2+3+4] |

**Note:**
1. Weeds controlled with the higher rates in the given range.
2. Additional weeds controlled by post-emergence application.
   Grasses controlled when using higher dosage.
3. Variable control.
4. For more effective broadleaf weed control add Atrazine or Suprazine to the recommended dose rate of **CALIBRE SC** (Table 2)

3. The control of *Cyperus esculentus* is dependent on the following:
*Where a dosage choice is given, the higher rate should be used.
*Planting must be preceded by a deep ploughing.
*See “Application Table” for further information.

| Table 2<br>Additional herbicide recommendations | |
|---|---|
| **% Clay** | **Atrazine / Suprazine ℓ / ha)** |
| 0 - 10 | 0.5 |
| 11 – 15 | 0.5 – 0.75 |
| 16 – 20 | 0.75 – 1.0 |
| 21 – 30 | 1.0 – 1.25 |
| 31 – 40 | 1.25 – 1.50 |
| >40 | Not recommended |

**The following trademarks and registrations are acknowledged:**

| Product | Registration Number | Company |
|---|---|---|
| Atraflo 500 SC | L5504 | Nulandis® (A division of AECI Limited) |
| Bladbuff® 7 | L8121 | AECI® Limited |
| Magnum® | L4967 | Technichem (Pty) Ltd |
| Magnum® Super | L6679 | Technichem (Pty) Ltd |
| Suprazine® 600 SC | L4846 | Dow AgroSciences Southern Africa (Pty) Ltd |

**Bladbuff® 7** is the registered trademark of AECI® Limited

**Atraflo & Technibuff** are the registered tradenames of Nulandis® (A division of AECI Limited)