

KEEP OUT OF REACH OF CHILDREN
BEFORE USING THIS PRODUCT READ THE LABEL CAREFULLY

BASILIUM 960 EC™

Reg No. L 10661, Act No. 36 of 1947

Basilium 960 EC is a pre-emergence emulsifiable concentrate herbicide for the control of most annual grasses and certain broad-leaved weeds in dry beans, groundnuts, soybeans, sunflowers, grain- and forage sorghum, sugarcane, potatoes and lupins, as well as early post emergence in maize.

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Basilium 960 EC is 'n emulgeerbare konsentraat vooropkomsnukruiddoder vir die beheer van meeste eenjarige grasse en sekere breëblaaronkruid in droëbone, grondbone, sojabone, sonneblomme, graan- en voersorghum, suikerriet, aartappels en lupiene, asook vroeg na-opkoms in mielies.

GROUP/GROEP

K3

HERBICIDE/ONKRUIDDODER



DANGER



HAZARD STATEMENTS:

Very toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.
May cause allergic skin reaction and skin sensitizing.

PRECAUTIONARY STATEMENTS:

Keep out of reach of children.
Do not eat, drink or smoke while handling this product.
Wear protective gloves, protective clothing, and eye protection.

ACTIVE INGREDIENTS | AKTIEWE BESTANDELE

S-Metolachlor 960 (CAS No. 87392-12-9) 960 g/ℓ S-Metolachloor 960 (CAS No. 87392-12-9)

Volume Packaging

20ℓ

Volume Verpakking

24 HOUR EMERGENCY NUMBER / 24 UUR NOODNUMMER

Poisons Helpline: 0861 555 777

Manufacturing date / Vervaardigingsdatum:

Batch Number / Lotnommer:

UN No / VN Nr :

DIRECTIONS FOR USE ENCLOSED

Batch number: Refer to details printed

Manufacturing date: Printed on container/bag

Registered by / Geregistreer deur:

AGRIVI SOUTH AFRICA (PTY) LTD

7 Louw Street, Kroonstad, 9499

Registration No. 2005/024417/07

Tel: +27 83 564 8357

GEBRUIKSAANWYSINGS INGESLUIT

Lotnommer: Verwys na besonderhede

Vervaardigingsdatum: Gedruk op houër/sak

Hazard Statement:

- Very toxic to aquatic life
- Very toxic to aquatic life with long lasting effects
- May cause eye and skin irritation.
- May cause skin sensitization.
- Store in a cool place away from food, feeds, seed, fertilizers and other agricultural chemicals.
- Keep out of reach of children, uninformed persons and animals.
- In case of poisoning call a doctor and make this label available to him/her.
- Re-entry: Do not enter treated field within 1 day after application unless wearing protective clothing.

Aerial application:

Notify all inhabitants in the immediate vicinity of the lands 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 effective under all conditions. The activity and effect thereof may be affected by factors such as abnormal climatic and storage conditions, quality of dilution water, incompatibility with other substances not indicated on the label and the occurrence of resistance of the weed against the remedy, as well as by the method, time and accuracy of application. The registration holder furthermore does not accept responsibility for damage to lawns, vegetation, the environment or harm to man or animal, or for lack of performance of the remedy concerned due to failure by the user to follow the label instructions, or to the occurrence of conditions which could not have been foreseen in terms of registration. Consult the supplier in the event of any uncertainty.

PRECAUTIONS:

- Keep out of reach of children
- Do not inhale fumes or spray mist.
- Wear protective clothing: rubber gloves, rubber boots and a suitable face shield, when handling the concentrate, preparing the spray mixture and during application.
- Wash contaminated clothing after use.
- In case of accidental contact with skin or eyes, flush with plenty of cold water and get medical attention if necessary.
- Do not eat, drink or smoke whilst mixing or applying the product or before washing hands and face and change of clothing.
- Prevent spray drift and/ or contamination onto susceptible crops, grazing, rivers, dams or any other areas not under treatment.
- Thoroughly clean spraying equipment directly after use and dispose of wash water where it will not contaminate food, grazing, boreholes, 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 10 % 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 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.

RELEVANT SUBSTANCE

Active Ingredients/Substance	CAS No	Quantity g/ℓ
S-metolachlor	87392-12-9	167

SYMPTOMS OF HUMAN POISONING:

Irritation effects on skin and mucous membranes are the most common reactions. May cause irritation to the eyes. Allergic skin reaction may occur. May cause skin sensitization. Large ingestions can cause nausea, vomiting, abdominal distress and diarrhoea. (Poisons Helpline 0861 555 777)

FIRST AID TREATMENT

- Skin contact: Remove contaminated clothing, shoes and leather goods immediately. Wash skin gently and thoroughly with non-abrasive soap and large amounts of water. Seek medical advice if necessary.
- Eye contact: Rinse eyes immediately with large amounts of gently flowing cold water or normal saline solution, for approximately 15 to 20 minutes. Occasionally lift the upper and lower lids. If irritation persists, get medical attention.
- Inhalation: Immediately remove source of contamination or move victim to fresh air. Perform artificial respiration and administer oxygen if necessary. Keep person warm and at rest. **Seek medical advice immediately.**
- Ingestion: Do not induce vomiting. Get medical attention immediately. Qualified medical Personnel should perform administration of gastric lavage or oxygen.

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.

RESISTANCE WARNING:

Basilium 960 EC is a group code K3 herbicide. Any weed population may contain individuals naturally resistant to **Basilium 960 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 **Basilium 960 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.

USE RESTRICTIONS:

- Do not apply **Basilium 960 EC** to poorly drained soils or soils with a compaction layer, as waterlogging and herbicide injury may occur.
- Heavy rain (25mm per day or 50 mm over a 3- to 7-day period) on very sandy soils (<15 % clay) low in organic matter (<1%) as well as flood irrigation can reduce weed control performance.
- **Basilium 960 EC** may damage the following crops under conditions as mentioned. Dry beans on fields where monoculture is practiced and soilborne diseases are prevalent, also dry beans and sunflowers on shallow, sandy, waterlogged soils with an impermeable clay layer at less than 100 cm depth. **Basilium 960 EC** damage to dry beans is sometimes associated with hot, dry weather and a plough-sole in the soil.
- When **Basilium 960 EC** is applied to dry beans or grain sorghum, the seed must be treated with effective fungicides to control seedling diseases, such as *Pythium spp.*, *Rhizoctonia spp.* etc.
- Use restrictions for any herbicides used in combination with **Basilium 960 EC**, must be adhered to.

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

Compatibility:

- **Basilium 960 EC** can be used in tank mixtures with **Paraquat ion 145 g/l, Ametryn 500 g/l, 2,4-D Amine 480 g/l, Diuron 800 g/l, Metribuzin 480 g/l, Atrazine 291 g/l + Terbutylazine 291 g/l + related active triazines 18 g/l** and **Atrazine 488 g/l + other triazine 12 g/l**.
- If tank mixtures are performed with other products, small quantities of the products in the correct ration should be mixed with the appropriate quantity of water, to determine compatibility.
- Water quality and formulation of other products, may influence compatibility.

Mixing instructions:

- Shake container well before use. Close container after use.
- Half fill the spray tank with clean water; add the required amount of **Basilium 960 EC**, while maintaining agitation. Then complete the filling operation.
- When mixing **Basilium 960 EC** with other herbicides, use the following procedure:
 1. fill the spray tank three quarters with clean water. Add the required amount of complementary herbicide to the water, agitating continuously.
 2. continue filling the spray tank with water, and add the required amount of **Basilium 960 EC** just before the tank is filled, to its full level.
- Ensure thorough agitation of the mixing in the tank during mixing and spraying.
- Spray thorough agitation of the mixture in the tank during mixing and spraying.
- Spray mixtures must be sprayed out immediately and not allowed to stand in the spray tank overnight.
- Thoroughly flush out spraying equipment at the end of the spraying operation.

Application recommendation:

- 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 **Basilium 960 EC** or its tank mixtures preferably at planting or immediately after planting, but not later than 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.
- **Basilium 960 EC** can also be shallowly incorporated early in the season to improve reliability of 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 that the rows are planted to assist emergence.
- Harrowing after application may reduce weed control, if untreated soil is thrown into deep planter furrows.
- **Basilium 960 EC** has no post-emergence activity and can be applied post-emergence to the crop after a cultivation, when no weeds are present.
- Ensure that sufficient fertilizer is placed near the seed at planting, to promote vigorous seedling growth.

Aerial Application:

Aerial application of **Basilium 960 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). It is important to 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:

- Flying height: The height of the spray boom should be maintained at 3 to 4 metres above the target. Do not spray when aircraft is in a climb, at the top of, or during a dive, or when banking.
- Use suitable atomizing equipment (hydraulic nozzles or rotary atomizers) that will produce the desired droplet size and coverage, but which will ensure the minimum loss of product either through endodrift (within target field) or exodrift (outside target field). The operator must use a setup that will produce a droplet spectrum with the lowest possible Relative Span. All nozzles/atomizers should be positioned 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.

- Aerial application of this product must not be done under turbulent, unstable conditions during the heat of the day when rising thermals and downdraughts occur.
- Also note that the application of this product 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 the movement of the suspended spray cloud away from the target field.
- Ensure that the fields are accurately marked and 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 spray log and kept for future reference.

Pre-emergence aerial application:

- Volume: A spray mixture volume of 30 litres per hectare is recommended. 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: Droplet coverage of 20 to 30 droplets per cm² must be recovered at the target.
- Droplet size: A droplet spectrum with a VMD of 350 to 400 micron is recommended. Ensure that the production of fine droplets (less than 150 mikron with high drift & evaporation potential) is restricted to a minimum.

APPLICATION RATES

A. GROUNDNUTS, DRY BEANS, SUNFLOWERS, SOYBEANS AND LUPINS

Table 1: The following rates of Basiliium 960 EC are recommended for the different crops on various soil types and for the control of certain weeds.

Soil type	% Clay	Basiliium 960 EC (ℓ / ha)
Sand / loamy sand / sandy loam	0 to 20	0,6 to 0,8
Sandy clay loam	21 to 30	0,8 to 1,0
Sandy clay loam	> 30 %	1,0 to 1,3

NOTE

- The higher application rates of **Basiliium 960 EC** are recommended for control of Yellow nutsedge (*Cyperus esculentus*) and Crabfinger-grass (*Digitaria sanguinalis*) and also on soils with > 1.0 % organic matter.

B. POTATOES

Pre-emergence in respect of weeds:

Apply 1.2 litres per hectare, under dry land conditions, pre-emergence to potatoes and weeds, after the first summer rains.

Early post-emergence in respect of weeds:

Basilium 960 EC is a pre-emergence herbicide. However, for early post weed emergency apply 1.2 litres per hectare under dry land conditions, after the first summer rains in a tank mixture with **Paraquat ion 145 g/ℓ** at 1 to 2 litres per hectare.

Basilium 960 EC / Paraquat ion 145 g/ℓ mixtures **must not** be applied after 10 % potato emergence. A rate of 1.0 litres per hectare **Basilium 960 EC** can be applied under irrigation.

Basilium 960 EC can also be applied post-emergence to the potatoes after ridging.

C. SUGARCANE

Pre-emergence application:

- Apply 1.0 to 1.6 liters per hectare **Basilium 960 EC** on all soil types as a pre-emergence treatment.
- The higher rate is recommended on soils with more than 35 % clay on all soil types where *P. maximum* is a problem and/or for improved control of *C.esculentus* and/or for longer residual control.
- Apply **Basilium 960 EC** at 2 litres per hectare if the soil organic matter content exceeds 1 % and the caly content exceeds 35 %.

D. MAIZE

Table 2: **Basilium 960 EC** applied post-emergence on maize.

Soil type	% Clay	S-Metolachlor 960 g/ℓ (ℓ/ha)
Sand	0 to 10	0,35
Loamy sand / sand loam	11 to 20	0,30
Sandy clay loam	21 to 30	0,35
Sandy clay loam / sandy clay	31 to 40	0,35 to 0,50
Sandy clay / turf	41 to 50	0,35 to 0,50

NOTE

- The higher dosage rate of **Basilium 960 EC** may be used if grass weeds have started to emerge at the time of the post-emergence application.

E. GRAIN AND FORAGE SORGHUM

Basilium 960 EC can be used in sorghum provided the seed has been pretreated, as prescribed, with a suitable, registered seed treatment to prevent phytotoxicity by **Basilium 960 EC**.

Table 3: **Basilium 960 EC** applied pre-emergence in sorghum after seed treatment.

Soil type	% Clay	Basilium 960 EC ℓ / ha
Sand / loamy sand / sandy loam	0 to 20	Not recommended
Sandy clay loam	21 to 30	0,8
Sandy clay loam / sandy clay	31 to 40	1,0
Turf	> 40	1,0 to 1,3

NOTE

- An application rate of 2.0 litres per hectare is recommended on turf soils, for improved control of Sweet signal grass and Yellow nutsedge.
- Prevent the formation of a soil crust through a shallow cultivation as soon as possible.
- Very wet conditions during the first 4 to 6 weeks after **Basilium 960 EC** application may damage the sorghum, but it is normally outgrown.
- The presence of seedling diseases may result in **Basilium 960 EC** damage to the sorghum.
- Post emergence applications of **Atrazine 500 g/ℓ SC** or **Atrazine 291 g/ℓ + Terbutylazine 291 g/ℓ & Related active triazines 18 g/ℓ SC** can be applied in tank mixture with **2,4-D Amine 480 g/ℓ** for broad leaf control in sorghum. Consult the **Atrazine 500 g/ℓ SC** or **Atrazine 291 g/ℓ + Terbutylazine 291 g/ℓ & related active triazines 18 g/ℓ** labels for details.

F. TOBACCO (Summer rainfall region only).

Apply **Basilium 960 EC** within 3 days after transplanting while the plants are still wilted. When the tobacco is turgid, the spray must be directed to prevent it from entering the funnel, where the growing point may be damaged. If actively growing leaves are sprayed, scorching may occur. If **Basilium 960 EC** is sprayed on gravelly or soils with less than 10 % clay, the spray should be directed at least 10 cm on both sides away from the plant row to prevent leaching to the root zone of the tobacco.

The **Basilium 960 EC** can be activated by applying overhead irrigation of 10 to 15 mm within 2 to 3 days after application, on soils with less than 35 % clay and 20 to 30 mm on soils with more than 35 % clay.

Table 4: Basilium 960 EC application rates in tobacco.

Soil type	% Clay	Basilium 960 EC ℓ / ha
Sand	0 to 10	0,5
Loamy sand / sandy loam	11 to 20	0,7
Sandy clay loam	21 to 35	1,0
Sandy clay	> 35	1,4

NOTE

- Only strong and healthy plants should be transplanted.
- Tobacco should be properly transplanted. Roots that are exposed to Basilium 960 EC at application will result in adversely affected plants.

WEEDS CONTROLLED BY BASILIUM 960 EC:

<i>Brachiaria eruciformis</i>	Litjiesinjalgras
<i>Chloris virgata</i>	Witpluim-Chloris
<i>Dactyloctenium aegyptium</i>	Hoenderspoor
<i>Digitaria sanguinalis</i>	Kruisvingergras
<i>Echinochloa crusgalli</i>	Hanepootmanna
<i>Eleusine indica</i>	Jongosgras
<i>Panicum maximum</i>	Gewone Buffelsgras
<i>Panicum schinzi</i>	Soetbuffelsgras
<i>Pseudobrachiaria deflexa</i>	Bastersinjalgras
<i>Setaria pallide-fusca</i>	Rooiborselgras
<i>Setaria verticillata</i>	Klitsborselgras
<i>Tragus berteronianus</i>	Klein wortelsaadgras
<i>Tragus racemosus</i>	Groot wortelsaadgras
<i>Urochloa mosambicensis</i>	Bosveldbeesgras
<i>Urochloa panicoides</i>	Beesgras

WEEDS VARIABLY CONTROLLED BY BASILIUM 960 EC:

<i>Amaranthus hybridus</i>	Common pigweed
<i>Amaranthus spinosus</i>	Thorny pigweed
<i>Amaranthus thunbergi</i>	Red pigweed
<i>Chenopodium carinatum</i>	Green goosefoot
<i>Cleome monophylla</i>	Spindlepod
<i>Commelina benghalensis</i>	Wandering Jew
<i>Cyperus esculentus</i>	Yellow nutsedge
<i>Datura ferox</i>	Large thorn apple
<i>Datura stamonium</i>	Thorn apple
<i>Galingsoga parviflora</i>	Gallant soldier
<i>Nicandra physaloides</i>	Apple of Peru
<i>Portulaca oleracea</i>	Purslane

NOTE

- The control of Yellow nutsedge (*Cyperus esculentus*) is dependent on a thorough ploughing immediately before planting, application 1 to 2 days after planting, which is followed by about 10 to 20 mm rain within 7 to 10 days after ploughing. More rain is required on heavy soils.

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