



syngenta

Reg. No. **L8089** Act No. 36 of 1947 **N-AR 1011** (Namibia)

A suspension emulsion systemic pre-emergence herbicide for the control of annual broadleaf weeds, grasses and the suppression of certain weeds in maize.

GROUP	27 15	HERBICIDE
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**Active Ingredients:**  
mesotrione (callistemone)..... 83,3 g/l  
s-metolachlor (α-chloracetamide). 416,7 g/l

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WARNING

**Hazard statements:**

May cause an allergic skin reaction. Causes serious eye irritation. Suspected of damaging the unborn child. Very toxic to aquatic life with long-lasting effects.

**Precautionary statements:**

**Prevention:** Obtain special instructions before use. Avoid breathing mist or vapours. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

**Response:** If exposed or concerned, get medical advice/attention. If skin irritation or rash occurs, get medical advice/attention. Collect spillage.

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**UN 3082**

Registration holder  
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**1. WARNINGS:**

**Hazard Statements:** May cause an allergic skin reaction. Causes serious eye irritation. Suspected of damaging the unborn child. Very toxic to aquatic life with long-lasting effects.

**Withholding periods:** Minimum number of days between last application and harvest or grazing.

**MAIZE**..... 56 days

- May irritate the eyes and skin.
- Keep out of reach of children, uninformed persons and animals.
- Store in a cool, dry place away from food and feed.
- **Do not use in sweet corn or popcorn.**
- **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 the drift to contaminate water or adjacent areas.
- **Re-entry:** Do not enter treated area until spray deposit has dried, unless wearing protective clothing.

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 disease 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 and the environment, or harm to people 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, that could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

**2. PRECAUTIONS:**

**Precautionary statements: Prevention:** Obtain special instructions before use. Avoid breathing mist or vapours. Wear protective gloves/protective clothing/eye protection/

face protection/hearing protection. **Response:** If exposed or concerned, get medical advice/attention. If skin irritation or rash occurs, get medical advice/attention. Collect spillage.

- Do not eat, drink, or smoke while handling this product.
- Prevent contamination of food, feed, drinking water and eating utensils.

**For safety when mixing**

- Wear eye protection (face shield). If you get **CAMIX** in your eyes, flush it out immediately with running water for at least 15 minutes.
- Wear rubber gloves. If you get it on your skin, wash it off at once.
- If you get it on your clothes, change and wash them.
- 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 (3) times with a volume of water equal to a minimum of 10% of that of the container. Add the rinsate to the contents of the spray tank before destroying the container in the prescribed manner.

**For safety when spraying**

- Avoid inhalation of spray mist.
- Avoid contact with the spray as far as possible.
- Avoid spray drift onto susceptible crops, grazing, rivers, dams and areas not under treatment.

**For safety after spraying**

- Clean applicator thoroughly after use.
- Do not spray, drain or flush equipment on or near trees or plants or where their roots may extend.
- Dispose of wash water where it will not contaminate crops, grazing, rivers, dams or areas not under treatment.
- Destroy empty container in the prescribed manner and do not re-use for any other purpose.
- Change and wash your work clothes.
- Wash yourself.

### 3. RELEVANT SUBSTANCES:

Chemical name	
s-metolachlor	
Classification	Concentration (% w/w)
Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410  M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10	≥ 30 - < 50
Chemical name	
mesotrione (ISO)	
Classification	Concentration (% w/w)
Repr. 2; H361d STOT RE 2; H373 (Nervous system, Eyes) Aquatic Acute 1; H400 Aquatic Chronic 1; H410  M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10	≥ 3 - < 10
Chemical name	
benoxacor	
Classification	Concentration (% w/w)
Skin Sens. 1; H317 Aquatic Chronic 1; H410  M-Factor (Chronic aquatic toxicity): 1	≥ 1 - < 2,5
Chemical name	
1,2-benzisothiazol-3(2H)-one	
Classification	Concentration (% w/w)
Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 2; H411  M-Factor (Acute aquatic toxicity): 1	≥ 0,025 - < 0,05

### 4. RESISTANCE MANAGEMENT:

**CAMIX** is a group code 27 and 15 herbicide. Any weed population may contain individuals naturally resistant to **CAMIX** and other group code 27 or 15 herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly and exclusively in programs. These resistant weeds may not be controlled by **CAMIX** or any other group code 27 or 15 herbicides.

#### 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 programs.

For specific information on resistance management

contact the registration holder of this product.

### 5. USE RESTRICTIONS:

#### 5.1 General

- Do not use **CAMIX** on sweet corn, popcorn and inbred parent lines of maize hybrids or newly released cultivars without first consulting with your chemical supplier or with the seed company concerned.
- Do not apply **CAMIX** through any irrigation system other than a centre pivot system.
- Disturbance of soil after pre-emergence applications (e.g., soil cultivation) can result in regermination of weeds resulting in reduced weed control.

#### 5.2 Follow-on Crops

When only **CAMIX** has been sprayed the following waiting periods should be adhered to:

a	Wheat and barley	1 month
b	Grain sorghum	2 months
c	Potatoes	6 months
d	Soybeans, dry beans, groundnuts, sunflowers and cotton	9 months
e	All other crops	24 months

- Where **CAMIX** and GESAPRIM SUPER are tank mixed, follow the crop rotational indications as on the GESAPRIM SUPER label.
- All rotational crops should be planted only after thorough cultivation. Since the product is metabolised by microbial activity, periods of low microbial activity might extend the residual activity of **CAMIX**. A deep plough action will allow for sufficient loosening of soil and compact layers, to ensure a complete turning of the soil.

#### Warning: Possible damage to triazine sensitive crops

- Where soils have been treated with lime to correct the soil pH, the possibility of crop damage increases dramatically in fields where triazines were previously applied. This is due to the triazine molecules being replaced on the clay complex with calcium cations and the triazine thus becoming more available in the soil-water complex.
- Only maize should be planted in the season directly after soil pH adjustment with lime. No triazine sensitive crops should be planted in the season after the soil pH adjustment has been done with lime. This applies even if triazines were used at crop rotation rates in previous years.
- Triazine sensitive crops include all broadleaf crops and all cereals.
- These warnings however do not guarantee that no damage would be experienced to the following maize crop as large volumes of previously applied triazines might be available depending on the volume of lime applied and the rainfall experienced.

Contact your local **SYNGENTA** representative to discuss crop rotation and crop protection programs to follow before embarking on any pH adjustment program.

#### 5.3 Factors Affecting Weed Control

### 5.3.1 Pre-emergence application

- A well prepared seedbed, free of clods and weeds is a requirement for good pre-emergence weed control.
- Prolonged dry soil conditions after a pre-emergence application may result in reduced control of germinating weeds.
- In soils with high organic matter or plant matter residues on the soil surface e.g., burnt trash or "stoppels" reduced residual action may be seen.
- Do not use **CAMIX** under stress conditions e.g., water logging, severe cold, excessive rain, poor fertilising, low pH, etc.
- Tank mixtures of **CAMIX** with organophosphates e.g., chlorpyrifos should be avoided as damage to maize might occur.
- **CAMIX** should not be applied in cropping systems where flood irrigation is used.

**6. DIRECTION FOR USE:** Use only as indicated.

#### 6.1 Compatibility

**CAMIX** is compatible with BROADSTRIKE 800WG (L6180), BATELEUR GOLD (L6136), GESAPRIM SUPER (L3914) and KARATE ZEON (L6330).

GESAPRIM SUPER can be replaced by atrazine plus terbuthylazine containing formulations or atrazine containing formulations. Ensure physical compatibility before application.

#### 6.2 Dilution Water

Use only clean water and buffer with a registered buffer.

#### 6.3 Mixing Instructions

- Fill the spray or pre-mix tank with clean water and engage agitator.
- Agitation must be continued throughout the mixing and spraying operation.
- Resuspend the spray mixture if agitation was suspended for longer than 5 minutes.
- When the spray or premix tank is half full with water, add **CAMIX** slowly and agitate until completely dispersed.
- If tank mixed, add **CAMIX** first to the water. Then add the other suspension concentrate GESAPRIM SUPER and only thereafter the emulsifiable concentrate KARATE ZEON.
- Lastly add the adjuvant and then continue to fill the tank to the required level with water whilst agitating.

#### 6.4 Ground Application

- **CAMIX** must be applied the same day as mixing.
- Apply by means of a tractor mounted boom sprayer which is correctly calibrated with continuous agitation to deliver at least 200 - 300 l spray mixture/ha. Avoid overlapping of spray swaths.
- In case of certain pre-emergence applications with hydraulic nozzles the water volume can be lowered to 100 l spray volume/ha. However, the use of the registered adjuvants at the correct rates, correct nozzles and nozzle spacing, adequate coverage and nozzle sizes are then very important. The disregard of

these factors will lead to poor control of certain weeds.

- Flat fan hydraulic nozzles (110°) are recommended for optimum coverage.
- No pre-emergence applications of **CAMIX** should be done with sleeve boom sprayers.
- If these precautions are not adhered to the registration holder cannot be held responsible for any non-performance or damages suffered.
- Rain or irrigation of 10 - 20 mm is needed after application to leach the chemical into the germinating zone. If this precipitation does not happen within 14 days of application, reduced efficacy can be expected.

### 6.5 Aerial Application

(Only pre-emergence in maize)

#### Avoid chemical drift at all times.

Aerial application of **CAMIX** may only be done by a registered aerial application operator using a correctly calibrated, registered aircraft according to the instructions of SANS 10118 (Aerial Application of Agricultural Remedies).

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. Drift should be avoided at all times. It is therefore essential that the following criteria are met:

a) Application parameters:

- **Volume:** A volume of 25 - 30 l/ha is recommended. As **CAMIX** has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy or be held responsible for any adverse effects if the product is applied aerially at a lower volume rate than recommended above.
- **Droplet coverage:** A droplet coverage of 20 - 30 droplets per cm<sup>2</sup> must be recovered at the target.
- **Droplet size:** A droplet spectrum with a VMD of 350 - 400 microns is recommended. Ensure that the production of fine droplets (less than 150 microns) is restricted to a minimum.
- **Flying height:** The height of the spray boom should be maintained at 3 - 4 metres above the target. Do not spray when aircraft is in a climb, at the top or during a dive, or when banking.

b) Equipment:

- Use suitable atomising equipment (hydraulic nozzles or rotary atomisers) 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/atomisers should be positioned within the inner 60 - 75% of the wingspan to prevent droplets from entering the wingtip vortices.

c) Meteorological conditions:

- 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.

- Aerial application of **CAMIX** 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 **CAMIX** under temperature inversion conditions (spraying in or above the inversion layer) 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.

## 6.6 Centre Pivot Application

(Only pre-emergence in maize)

**CAMIX** can be applied through a well-operated and well-maintained centre pivot irrigation system. The centre pivot should apply between 4.5 mm and 7.5 mm of water when applying **CAMIX**. Control should be for about 56 days where after the follow-on application should be applied by tractor sprayer.

KARATE ZEON can be added to this pre-emergence mixture to control cutworms at the registered rate (70 ml/ha).

- Calculate the injection rate carefully and make sure it is correct.
- Apply within two (2) days of planting.
- Application should be done to fields which are well prepared and with no germinating or established weeds.
- Applications should only be done through centre pivots equipped with an injector system.
- Once **CAMIX** has been applied on the whole of the centre pivot area, it should be set to apply the following water volumes:
  - 10 mm water/ha when clay content < 20%
  - 15 mm water/ha when clay content is 20 - 35%
  - 20 mm water/ha when clay content > 35%
- Keep soil wet for a period of 7 - 14 days after application.
- Be aware that the distribution of **CAMIX** and GESAPRIM SUPER will only be as even as the application of the irrigation water.
- Do not apply chemicals through the irrigation water in excessive wind speeds (< 6 ms<sup>-1</sup>).
- Be careful when the irrigation system overlaps at the end of the cycle area as serious overdosage and possible damage could occur.
- Care should be taken when applying chemicals through the centre pivot as breakages or stoppages could lead to major overapplication of the chemicals.
- Care should be taken not to contaminate boreholes or dams with accidental spillages of chemicals in the irrigation system. Injection of the chemicals close, or at the centre is preferable. Both the injector pump and the water pump should be fitted with valves to stop injection as soon as the pivot's forward movement is stopped. The main irrigation water supply line should also be fitted with a non-return valve to prevent treated water to run back into the supply source.

## 7. CROPS:

### MAIZE

- The clay content of the soil does not affect the dosage rate of **CAMIX**.

- **CAMIX** should be applied pre-emergence of either the crop or the weeds.
- The pre-emergence application of **CAMIX** must be done on a well-prepared weed-free seedbed to ensure an even distribution.
- If **CAMIX** is applied as indicated, 28 - 56 days control of the weeds as listed can be expected.

### 7.1.1 Pre-emergence application of CAMIX plus GESAPRIM SUPER

This pre-emergence application should be followed up with post-emergence applications of registered mixtures of CALLISTO, GARDOMIL GOLD, METAGAN GOLD or GESAPRIM SUPER approximately 5 - 6 weeks later, as indicated on these registered labels.

<b>CAMIX</b>	<b>0.9 l/ha</b>
<i>Acanthospermum hispidum</i> <i>Chenopodium album</i> <i>Chenopodium carinatum</i> <i>Echinochloa colona</i> <i>Eleusine indica</i> <i>Nicandra physaloides</i> <i>Panicum schinzii</i> <i>Physalis angulata</i> <i>Setaria pallide-fusca</i> <i>Tagetes minuta</i>	upright starbur white goosefoot green goosefoot marsh grass goose grass apple-of-Peru sweet buffalo grass wild gooseberry red bristle grass khaki weed
<b>CAMIX + GESAPRIM SUPER</b>	<b>0.9 l/ha + 0.8 - 1.33 l/ha</b>
<i>Acanthospermum hispidum</i> <i>Chenopodium album</i> <i>Chenopodium carinatum</i> <i>Echinochloa colona</i> <i>Eleusine indica</i> <i>Nicandra physaloides</i> <i>Panicum schinzii</i> <i>Physalis angulata</i> <i>Setaria pallide-fusca</i> <i>Tagetes minuta</i>	upright starbur white goosefoot green goosefoot marsh grass goose grass apple-of-Peru sweet buffalo grass wild gooseberry red bristle grass khaki weed

<b>CAMIX</b>	<b>1.2 l/ha</b>
<i>Acanthospermum hispidum</i> <i>Amaranthus hybridus</i> <i>Brachiaria eruciformis</i> <i>Chenopodium album</i> <i>Chenopodium carinatum</i> <i>Cleome monophylla</i> <i>Commelina benghalensis</i> * <i>Datura ferox</i> <i>Digitaria sanguinalis</i> <i>Echinochloa colona</i> <i>Eleusine indica</i> <i>Eragrostis curvula</i> * <i>Hibiscus cannabinus</i> <i>Hibiscus trionum</i> <i>Nicandra physaloides</i> <i>Panicum schinzii</i> <i>Physalis angulata</i> <i>Polygonum aviculare</i> <i>Setaria pallide-fusca</i> <i>Tagetes minuta</i> <i>Triumfetta pilosa</i>	upright starbur common pigweed sweet signal grass white goosefoot green goosefoot spindlepod Benghal wandering Jew large thorn apple crab fingergrass marsh grass goose grass weeping love grass kenaf bladder weed apple-of-Peru sweet buffalo grass wild gooseberry prostrate knotweed red bristle grass khaki weed ---
<b>CAMIX + GESAPRIM SUPER</b>	<b>1.2 l/ha + 0.8 - 1.33 l/ha</b>

<b>The above plus</b>	
<i>Bidens pilosa</i> <i>Crotalaria sphaerocarpa</i> <i>Tribulus terrestris</i>	<b>blackjack</b> <b>mealie Crotalaria</b> <b>dubbeltjie</b>

label should be followed when used in combination with CALLISTO.

<b>CAMIX</b>	<b>1.5 €/ha</b>
<i>Acanthospermum hispidum</i> <i>Amaranthus hybridus</i> <i>Brachiaria eruciformis</i> <i>Chenopodium album</i> <i>Chenopodium carinatum</i> <i>Cleome monophylla</i> <i>Commelina benghalensis</i> * <i>Datura ferox</i> <i>Digitaria sanguinalis</i> <i>Echinochloa colona</i> <i>Eleusine indica</i> <i>Eragrostis curvula</i> * <i>Hibiscus cannabinus</i> <i>Hibiscus trionum</i> <i>Nicandra physaloides</i> <i>Panicum schinzii</i> <i>Physalis angulata</i> <i>Polygonum aviculare</i> <i>Setaria pallide-fusca</i> <i>Tagetes minuta</i> <i>Triumfetta pilosa</i> <i>Urochloa panicoides</i> <i>Xanthium strumarium</i> * <i>Hibiscus cannabinus</i> <i>Hibiscus trionum</i> <i>Nicandra physaloides</i> <i>Panicum schinzii</i> <i>Physalis angulata</i> <i>Polygonum aviculare</i> <i>Setaria pallide-fusca</i> <i>Tagetes minuta</i> <i>Triumfetta pilosa</i> <i>Urochloa panicoides</i> <i>Xanthium strumarium</i>	<b>upright starbur</b> <b>common pigweed</b> <b>sweet signal grass</b> <b>white goosefoot</b> <b>green goosefoot</b> <b>spindlepod</b> <b>Benghal wandering Jew</b> <b>large thorn apple</b> <b>crab fingergrass</b> <b>marsh grass</b> <b>goose grass</b> <b>weeping love grass</b> <b>kenaf</b> <b>bladder weed</b> <b>apple-of-Peru</b> <b>sweet buffalo grass</b> <b>wild gooseberry</b> <b>prostrate knotweed</b> <b>red bristle grass</b> <b>khaki weed</b> --- <b>herringbone grass</b> <b>cocklebur</b> <b>kenaf</b> <b>bladder weed</b> <b>apple-of-Peru</b> <b>sweet buffalo grass</b> <b>wild gooseberry</b> <b>prostrate knotweed</b> <b>red bristle grass</b> <b>khaki weed</b> --- <b>herringbone grass</b> <b>cocklebur</b>

<b>CAMIX + GESAPRIM SUPER</b>	<b>1.5 €/ha + 0.8 - 1.33 €/ha</b>
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<b>The above plus</b>	
<i>Bidens pilosa</i> <i>Crotalaria sphaerocarpa</i> <i>Cyperus esculentus</i> <i>Portulaca oleracea</i> <i>Tribulus terrestris</i>	<b>blackjack</b> <b>mealie crotalaria</b> <b>yellow nutsedge</b> <b>purslane</b> <b>dubbeltjie</b>

<b>Only suppression of</b>	
<i>Bidens bipinnata</i> <i>Citrullus lanatus</i> <i>Cosmos bipinnatus</i> <i>Ipomoea purpurea</i>	<b>spanish blackjack</b> <b>bitter apple</b> <b>cosmos</b> <b>common morning glory</b>

\* Inconsistent control with **CAMIX** - add GESAPRIM SUPER to stabilise the control.

To increase the pre-emergence control of *Tribulus terrestris*, BROADSTRIKE 800WG at 25 g product/ha can be added to **CAMIX**.

All WARNINGS, RECROPPING INTERVALS and RECOMMENDATIONS including RESISTANCE WARNINGS on the BROADSTRIKE 800WG

**CAMIX**<sup>®</sup>, **DUAL**<sup>®</sup>, **GESAPRIM**<sup>®</sup>, **METAGAN**<sup>®</sup>, **PRIMAGRAM**<sup>®</sup> and **KARATE**<sup>®</sup> are registered trademarks of a Syngenta Group Company. **BROADSTRIKE** is a registered trademark of a Dow Agro Science SA (Pty) Ltd.

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