

# SURESTART®

## HERBICIDE

Registration number/Registrasie Nommer L10385 Act/Wet Nr. / No. 36 of / van 1947

**READ THE LABEL BEFORE USE**

**KEEP OUT OF REACH OF CHILDREN AND ANIMALS**

<b>GROUP</b>	<b>B, K3 &amp; O</b>	<b>HERBICIDES</b>
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A systemic suspension emulsion herbicide for the pre- and early post-emergence control of annual broadleaf weeds and some annual grasses in maize.	'n Sistemiese suspensie emulsie onkruidodder vir die voor- en vroeg na-opkomsbeheer van eenjarige breë-blaaronkruid en sommige eenjarige grasse in mielies.
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**DANGER**

**HAZARD STATEMENTS:**

- Causes mild skin irritation.
- May cause an allergic skin reaction.
- Causes serious eye irritation.
- May cause respiratory irritation.
- Very toxic to aquatic life with long lasting effects.

**PRECAUTIONARY STATEMENTS:**

- Avoid breathing mist/vapours/spray.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Collect spillage.
- Dispose of contents/container in accordance with applicable regulations.

**ACTIVE INGREDIENTS / AKTIEWE BESTANDDEEL**

Acetochlor .....	450 g/L .....	Asetochloor
Clopyralid .....	35 g/L .....	Klopiralied
(acid equivalent)		(suurekwaivalent)
Flumetsulam .....	14 g/L .....	Flumetsulam
Furilazole (safener) .....	10.79 g/L .....	Furilasool (beveiliging)

**NET MASS** ..... L ..... **NETTO MASSA**

**REGISTRATION HOLDER / REGISTRASIEHOUER**  
CORTEVA AGRISCIENCE RSA (PTY) LTD / (EDMS) BPK  
REG NO 1991/003030/07

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272 West Avenue, CENTURION, 0157 South Africa  
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Batch Number .....		Lotnommer
Date of Manufacture .....		Vervaardigingsdatum
Expiry date .....		Vervaldatum

**UN3082**

Poisons Helpline: +27(0)861-555-777  
Local Emergency No: +27(0)82-895-0621 (SA only)  
24 Hour Emergency Tel No: +32-3-575-5555  
Information Hotline Tel No: +27(0)12 683-5700

## **WARNINGS:**

### **HAZARD STATEMENTS:**

Causes mild skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye irritation.  
May cause respiratory irritation.  
Very toxic to aquatic life with long lasting effects

**Maize – Allow at least 120 days between last application and harvest of grain.**

**Withholding period for feeding/grazing – 28 days**

Handle with care.

Do not swallow.

Skin contact might cause slight irritation with local redness.

Toxic to fish and other aquatic organisms.

Store away from food, feedstuff, seeds, and other agricultural chemicals

Store in a cool, dry place.

Keep out of reach of children, uninformed persons, and animals.

**RE-ENTRY INTERVAL:** Do not enter treated area until spray deposit has dried unless wearing protective clothing.

## **DISCLAIMER**

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 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 the event of any uncertainty.

## **PRECAUTIONS:**

### **PRECAUTIONARY STATEMENTS:**

Avoid breathing mist/vapours/spray.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Collect spillage.  
Dispose of contents/container in accordance with applicable regulations.

Do not inhale vapour or spray mist.

Avoid eye and skin contact. Wear rubber gloves, face shield and protective clothing when handling the concentrate.

Wash contaminated clothing after use.

Wash with soap and water after use.

Do not eat, drink, or smoke whilst mixing or applying the product or before washing hands and face.

Avoid drift or spray onto other crops, pastures, rivers, dams, and areas not under treatment.

Clean all mixing and application equipment thoroughly after use and before it is used with other products (see Sprayer clean-up).

Rinse empty container three times with a volume of water equal to a minimum of 10 % of that of the container.

Add the rinse water to the contents of the spray tank before destroying the empty container in a safe manner and do not re-use it for any other purpose.

Prevent contamination of food, feedstuff, drinking water and eating utensils.

## **RELEVANT SUBSTANCES:**

<b>COMPONENT</b>	<b>CAS No.</b>	<b>Concentration</b>
Acetochlor	34256-82-1	41.72
Furilazole	121776-33-8	0.98

## **SYMPTOMS OF HUMAN OVER EXPOSURE:**

May cause moderate eye irritation.

Prolonged or frequently repeated skin contact may cause allergic reactions with local redness in some individuals.

## **FIRST AID MEASURES:**

Never give fluids or induce vomiting if patient is unconscious or is having convulsions.

### **Ingestion:**

No emergency medical treatment necessary.

### **Eye contact:**

Hold eyes open and rinse slowly and gently with clean water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. If effects occur, consult a physician, preferably an ophthalmologist.

### **Skin Contact:**

Remove contaminated clothing. Immediately wash skin with soap and plenty of water. Wash contaminated clothing before reuse.

### **Inhalation:**

Move person immediately to fresh air. Consult a physician.

## **NOTE TO PHYSICIAN:**

There is no specific antidote. Supportive care. Treatment based on judgment of physician in response to symptoms of patient.

## **RESISTANCE PREVENTION AND MANAGEMENT**

**SURESTART®** has multiple modes of action – a mixture of a systemic auxin (Group O), a cell-division inhibitor (K<sub>3</sub>) and an ALS (**A**ceto**L**actate **S**ynthase) enzyme inhibitor (Group B). This product controls weeds by disrupting normal plant growth patterns and/or by inhibiting production of the enzyme essential for production of certain amino acids needed for normal plant growth.

Some naturally occurring weed biotypes resistant to **SURESTART® herbicide** and other herbicides that are either systemic auxin-type herbicides, cell-division inhibitors, or ALS inhibitors, may exist through normal genetic variability in any weed population. The resistant individuals can eventually dominate the weed population if herbicides with the same mode of action are used repeatedly. These resistant weeds, especially where known cases of ALS-resistant grasses occur, will not be controlled by **SURESTART® herbicide**, other systemic auxin-type, ALS inhibitors or cell-division inhibitors.

## **TO DELAY THE SELECTION OF RESISTANT WEEDS:**

- ❖ Integrate tillage, crop rotation, mechanical or chemical control methods (including the use of non-selective herbicides) during the fallow period into weed control programs whenever practical.
- ❖ Avoid exclusive repeated use of herbicides from the same mode of action group. Plan crop rotations to allow use of herbicides from different mode of action groups.
- ❖ Maintain herbicide use records for each field.
- ❖ Prevent movement of resistant weed seeds and vegetative plant material to other fields by cleaning harvesting and tillage equipment and planting clean seed.

- ❖ When grazing, start with fields with the least weed resistance before moving to fields with high resistance due to the possibility of animals spreading the seed.
- ❖ Inspect all fields annually to identify the development of resistance early.

For further advice on the prevention of herbicide resistance contact your local Corteva Agriscience™ representative.

In the case where the above-mentioned measures are not followed, Corteva Agriscience™ will not be liable for any damage which may occur if **SURESTART®** does not control resistant weeds.

## USE RESTRICTIONS

- Do not use **SURESTART®** on maize in combination with organophosphate insecticides, i.e., not in tank mixture with an organophosphate insecticide nor where an organophosphate insecticide was applied to the soil at planting or where the crop seed is treated with an organophosphate insecticide, or where an organophosphate insecticide has already been applied post-emergence to the maize crop.
- Do not apply **SURESTART®** to maize that is stressed by severe weather conditions (cold weather, heavy rain, or the risk of freezing temperatures), drought, water logging, nutrient deficiency, disease, insect damage or herbicide carry-over residues.
- Do not use **SURESTART®** on inbred parent lines of crop hybrids nor on experimental or newly released cultivars/varieties without first consulting the manufacturer, distributor and the seed company concerned.
- Apply the product strictly in accordance with the application directions.
- Do not contaminate any water bodies e.g., dams, rivers, boreholes, etc.
- **SURESTART®** should only be applied **ONCE** per season.
- Not to be used as an aerial application.
- Do not apply **SURESTART®** through any type of irrigation systems.
- Do not use flood irrigation to apply or incorporate this product – besides possible crop injury, weed control efficacy may also be reduced.
- Do not apply **SURESTART®** on dry soil after planting and then apply overhead irrigation.
- Do not use **SURESTART®** at all on fields where the crop rotation restrictions, on the labels of any preceding herbicides (e.g., triazines, sulfonylureas etc.) previously used on those same fields, have not been fully complied with.
- Do not apply **SURESTART®** pre-emergence to crops on soils with a pH (H<sub>2</sub>O) of 7.0 or higher because an associated higher bioavailability of herbicide for plant uptake may increase the possibility of crop injury. Bear this pH restriction in mind when planning to increase the soil pH with liming materials on fields where **SURESTART®** usage is also planned.

Conditions as listed below, may result in crop injury by **SURESTART®** and/or inadequate weed control:

- Poorly drained soils or soils with a compaction layer. Water logging in the presence of herbicides will cause stand reduction and/or stunted growth, which may lead to yield reduction.
- Soils with a pH (H<sub>2</sub>O) of 7 or higher.
- Soils with a pH (H<sub>2</sub>O) of lower than 5 and/or organic material content higher than 3 % may result in poor weed control efficacy.
- Conditions of heavy rain and/or irrigation on sandy or gravelly soils.
- Prolonged or abnormally cold and/or wet conditions.
- Plants under stress due to factors such as poor crop nutrition, nematode infestations, diseases, drought etc.
- Do not apply **SURESTART®** to seed maize, popcorn, and other exotic cultivars.

When tank mixing with Mamba® DMA 480 SL the warnings, precautions, use restrictions and directions for use on the Mamba® DMA 480 SL label must be fully adhered to.

## MINIMUM RECROPPING INTERVAL AND CROP ROTATION GUIDELINES

The minimum recropping interval includes the time of last application of **SURESTART®** to the anticipated date of replanting. The intervals specified below will only be valid if favorable soil moisture and temperature conditions prevail to promote more rapid breakdown of **SURESTART®** by microbial activity. Abnormally dry and/or cold conditions may result in slower degradation.

Careful consideration should be given to crop rotation plans prior to using **SURESTART®**.

To avoid injury to subsequent crops the following recropping intervals should be observed:

Following crops	Withholding periods
Maize	None
Wheat	4 months
Dry beans, groundnuts, potatoes, sorghum, soybeans, sunflowers	9 months
Barley, oats	12 months

To avoid injury to all other subsequent crops, replanting interval of at least **24 months** must be observed preceded by a test planting. Test strips of the desired rotational crop should be planted and monitored during germination and emergence for any abnormal growth to determine if the rotational crop can be grown successfully.

The above-mentioned waiting periods are valid only if the correct dose rate of **SURESTART®** was applied, alone or in combination with Mamba® DMA 480 SL, according to the soil type with a soil pH (H<sub>2</sub>O) of less than 7 and normal or above average rainfall occurred during and following the season in which the application was made.

## SOME WEEDS NORMALLY CONTROLLED BY SURESTART®:

### Pre-emergence

#### **Broadleaf weeds**

<i>Acanthospermum hispidum</i>	upright starbur
<i>Amaranthus hybridus</i>	Common pigweed
<i>Amaranthus spinosus</i>	thorny pigweed
<i>Bidens pilosa</i> **	Common Blackjack
<i>Chenopodium album</i>	white goosefoot
<i>Chenopodium carinatum</i>	Green goosfoot
<i>Cleome monophylla</i> **	spindlepod
<i>Commelina benghalensis</i> **	Bengal wandering Jew
<i>Datura ferox</i>	Large thorn apple
<i>Galinsoga parviflora</i>	gallant soldier
<i>Gynandropsis gynandra</i>	spider wisp
<i>Portulaca oleracea</i>	purslane
<i>Richardia brasiliensis</i> **	Tropical Richardia
<i>Schkuhria pinnata</i>	Dwarf Marigold
<i>Tagetes minuta</i> **	Khaki weed
<i>Tribulus terrestris</i>	Common dubbeltjie

## Grasses

<i>Brachiaria eruciformis</i>	sweet signal grass
<i>Chloris virgate</i>	feathertop Chloris
<i>Digitaria sanguinalis**</i>	Crab finger grass
<i>Echinochloa crus-galli</i>	Barnyard grass
<i>Eleusine coracana (indica)</i>	Goose grass
<i>Panicum maximum</i>	common buffalo grass
<i>Panicum schinzii</i>	sweet buffalo grass
<i>Setaria pallide-fusca</i>	red bristle grass
<i>Setaria verticillata</i>	sticky bristle grass
<i>Tragus racemosus</i>	Large carrotseed grass
<i>Urochloa panicoides</i>	herringbone grass

## Sedges

<i>Cyperus esculentus**</i>	Yellow nutsedge
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\*\*Variable control may be expected.

The control of the above-mentioned weeds may be detrimentally affected under the following conditions:

- A poorly prepared seedbed.
- Soils with a pH (H<sub>2</sub>O) of less than 5 and an organic matter content of more than 3 %.
- Dry conditions directly after application or a lack of sufficient rain on heavy soils.
- Occurrence of soil erosion because of excessive rain or irrigation or wind erosion can result in poor weed control.

## **Early Post-emergence with SURESTART® only (1-2 true leaf stage of weeds)**

### Broadleaf weeds

<i>Amaranthus hybridus</i>	Common pigweed
<i>Bidens pilosa**</i>	Common Blackjack
<i>Boerhavia diffusa</i>	Spiderling
<i>Cleome monophylla</i>	Spindelepod
<i>Commelina benghalensis**</i>	Bengal wandering Jew
<i>Cucumis myriocarpus</i>	Wild cucumber
<i>Datura ferox</i>	Large thorn apple
<i>Emex australis**#</i>	Spiny Emex
<i>Hibiscus cannabinus**</i>	Wild stockrose
<i>Portulaca oleraceae</i>	Common purslane
<i>Tagetes minuta**</i>	Khaki weed
<i>Tribulus terrestris</i>	Common dubbeltjie
<i>Xanthium strumarium**</i>	Cocklebur

\*\* Variable control may be expected

# Growth stage of Emex should not exceed the 2 true leaf stage (1<sup>st</sup> true leaves after cotyledon leaves). Weeds larger than specified (or weeds affected by stress or grazing prior to treatment) will die back but re-growth (with resultant flowering and seeding) may occur from the root crown.

## **Early post-emergence tank mixture with Mamba® DMA 480 SL**

When **SURESTART®** is used in a tank mixture with Mamba® DMA 480 SL refer to weed lists and rates as recommended on the Mamba® DMA 480 SL label.

Degree of control obtained, and duration of effect depend on weed species, weed size, growing conditions at, and following the period of application.

### **NOTE:**

**SURESTART®** controls certain weed species as listed above. Other annual grasses and broadleaf weed species that were not present during the development trials may possibly also be controlled to a certain degree. The registration holder does not accept any responsibility for weeds not listed.

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

### **GENERAL INFORMATION**

**SURESTART®** is a systemic suspension emulsion herbicide for the use as a pre- or early post-emergence treatment or as an early post-emergence application in a tank mixture with Mamba® DMA 480 SL for the control of annual broadleaf weeds and some annual grasses in maize in the summer rainfall region.

**SURESTART®** must be mixed with clean water and applied as a uniform pre- or early post-emergence broadcast spray by means of ground application.

**SURESTART®** for early post-emergence application should always be used in a tank mixture with a non-ionic adjuvant such as Break-Thru® or Silwet L-77®. The adjuvant must be added as the last ingredient to the spray tank. In the case of a tank mixture with Mamba® DMA 480 SL an adjuvant is only recommended when there is less than 1.1 % Mamba® DMA 480 SL in the spray mix.

For maximum early post-emergence control of weeds, apply **SURESTART®** with Mamba® DMA 480 SL to young weeds at the seedling stage (refer to Mamba® DMA 480 SL label for recommendations). Weeds should also be actively growing under moist conditions. Weeds under drought stress may be less susceptible.

**SURESTART®** in a tank mixture with Mamba® DMA 40 SL as an early post-emergence treatment should only be applied to maize containing the glyphosate tolerant gene. **Always refer to the Mamba® DMA 480 SL label for recommendations of rates and crop stages.**

Any individual plants that do not contain the glyphosate tolerant gene would die when sprayed with glyphosate based products e.g. Mamba® DMA 480 SL. The utmost care should be taken not to apply this tank mixture to non-glyphosate tolerant maize. Follow the label instructions for the application of this tank mixture to glyphosate tolerant maize as described on the Mamba® DMA 480 SL label.

### **COMPATIBILITY**

**SURESTART®** is compatible with the following products in a tank mixture:

- Mamba® DMA 480 SL           L 8388
- Silwet L-77®                 L 6145 Chemtura Chemical (Pty) Ltd
- Break-Thru®                 L 6764 Evonik Degussa Africa (Pty) Ltd

**ALWAYS REFER TO PRODUCT LABELS.**

## NOTES:

- (i) **WHERE ONE OF THE ABOVE PRODUCTS IS USED IN A TANK MIXTURE WITH SURESTART<sup>®</sup>, FULL DETAILS FROM THE RELEVANT LABEL MUST BE OBTAINED AND ADHERED TO.**
- (ii) The compatibility of **SURESTART<sup>®</sup>** in tank mixtures with recommended products may be influenced by the formulation of these products. The quality of the water may also have an effect on these tank mixtures. Since the formulation of recommended products may change without the knowledge of Corteva Agriscience RSA (Pty) Ltd and the quality of water may vary from farm to farm, a physical compatibility test should always be carried out prior to application. Corteva Agriscience RSA (Pty) Ltd does not accept any responsibility for the crop tolerance of these tank mixtures where the formulation of products has changed or for mixtures with products not listed above.

Consult your local representative for details.

## MIXING INSTRUCTIONS

**Used alone** – add the recommended amount of **SURESTART<sup>®</sup>** to the spray tank when the tank is half filled and then add the rest of the water to the tank. Allow time for complete dispersion/mixing before application.

**Tank mixture with Mamba<sup>®</sup> DMA 480 SL** – add products to the tank mixture in the following order:

- Add one-half of the required amount of clean water to the spray tank. Begin agitation.
- Add ammonium sulphate at the recommended dose rate.
- Add the required amount of **SURESTART<sup>®</sup>** to the spray tank. Allow time for complete dispersion/mixing before adding any other products.
- Add the recommended amount of Mamba<sup>®</sup> DMA 480 SL.
- Add a registered non-ionic adjuvant as the last ingredient to the spray tank only if there is less than 1.1 % Mamba<sup>®</sup> DMA 480 SL in the solution.
- Top up the spray tank with water until the final volume has been obtained. Ensure thorough agitation of the mixture in the tank during mixing or spraying.
- Tank mixtures must be sprayed out immediately and not be allowed to stand in the spray tank as the effectiveness may be reduced due to product degradation.
- Thoroughly re-agitate before re-using if a stoppage of spraying operations should occur for some reason.

## GROUND APPLICATION

**SURESTART<sup>®</sup>** on its own or in tank mixtures with Mamba<sup>®</sup> DMA 480 SL can be applied with any medium or high-volume sprayer equipment with an efficient agitation mechanism which is capable of adequate coverage and even distribution. Best results are obtained using flat fan-type spray nozzles and applying a minimum spray volume of 200 litres water per hectare.

Weeds that are screened off by other weeds or the crop may result in variable control due to insufficient coverage. When timing the application of **SURESTART<sup>®</sup>** this aspect must be considered. Best results are obtained with applications made at pre- or early post-emergence (1-2 true leaf stage) of the weeds when soil moisture levels are adequate.

### Post-plant pre-emergence

When planting into moist soil, **SURESTART<sup>®</sup>** must be applied **within three days after planting** (but preferably at planting) on a fine, even, firm, and freshly prepared seedbed free of weeds, excessive plant trash and large clods. The herbicide mixture should not be applied later than 3 (three) days after the final cultivation for seedbed preparation. Deviation from the aforesaid seedbed conditions and/or application timing may result in less effective weed control. To obtain good results it is also necessary that the application is followed within seven (7) days by 12-15 mm of rain or irrigation before the weeds emerge. If 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 top 10-20 mm of the soil. Cultivation equipment adjusted to run shallow and minimize soil movement will decrease the possibility of diluting or moving the herbicide from the weed control zone.



A rotary harrowing in the same direction of the rows may improve crop emergence if soil crusting is a problem, again minimize soil movement. To avoid possible stress to the crop due to inadequate nutrition and to promote vigorous initial crop seedling growth ensure adequate fertilizer is placed near the seed at planting.

**Do not** apply **SURESTART®** through any type of irrigation. Use overhead irrigation only to incorporate after application.

**SURESTART®** dosage rates when applied on its own or in tank mixture with Mamba® DMA 480 SL:

% Clay	<b>SURESTART® (L/ha) for overall application</b>
<b>11-20</b>	1.5 – 2.0
<b>21-30</b>	2.1 – 2.5
<b>31-40</b>	2.6 – 3.0

**NOTE:**

ADJUVANTS: The activity of **SURESTART®** is enhanced by the addition of an adjuvant, such as Break-Thru® or Silwet L-77® and this increases the consistency of control of susceptible weeds across varied environmental conditions. Adjuvants will also improve the efficacy of weeds that are moderately susceptible. Adjuvants are particularly beneficial under dry conditions.

Early post-emergence applications of **SURESTART®** must be mixed in a tank mix with an adjuvant as indicated on the label. Use the rate of the adjuvant recommended on the specific adjuvant label.

**Glyphosate-tolerant maize ONLY (Reduced tillage seedbed).**

When **SURESTART®** is used in a tank mixture with Mamba® DMA 480 SL, always refer to the Mamba® DMA 480 SL label for recommended rates per weed species.

For minimum-tillage or no-tillage systems, when weeds have already emerged and are present at the time of application, Mamba® DMA 480 SL may be used in a tank mixture with **SURESTART®**.

Note that 12-15 mm of rain or irrigation is needed within seven (7) days after application to activate the residual weed control effect of **SURESTART®** on newly emerging weeds.

Inadequate weed control of **SURESTART®** could occur if the density of plant trash on the soil surface is high and/or due to high weed pressure which may shield the soil acting herbicides from coming into contact with the soil surface.

The post-emergence effect of Mamba® DMA 480 SL on smaller emerged weeds could also be reduced if they are shielded from the spray by dense plant trash and/or larger weeds.

First consult the supplier before spraying in such situations.

Rain within six hours after application of the afore-mentioned tank mixture will decrease the efficacy of Mamba® DMA 480 SL. A follow-up treatment of Mamba® DMA 480 SL will be needed to control the weeds.

## GLYPHOSATE TOLERANT MAIZE ONLY (Early post-emergence)

SURESTART® in a tank mixture with Mamba® DMA 480 SL.

CROP	MAMBA® DMA 480 SL RATE/ha	WEED STAGE	SPRAY TIMING AND CROP STAGE AND IMPORTANT NOTES
Glyphosate tolerant maize	1.5 L/ha	Small weeds (less than 100 mm high or up to 8 leaf stage)	<p>Broadcast post-emergence to maize crop from emergence up to the V8 stage (V8 stage is reached when the first plants in the field have 8 leaves with closed collars around the main stem). The actual number of leaves may be more.</p> <p>Broadcast application of Mamba® DMA 480 SL to maize past the V8 stage may result in yield loss.</p> <p>Once maize is past the V8 stage, a directed application of Mamba® DMA 480 SL with drop nozzles must be done. This is to avoid spray mixture getting into the plant funnel and onto the plant reproductive portions and to ensure optimum spray coverage on weeds.</p> <p>Broadcast and/or directed applications must not be made if mechanical crop damage has occurred or will result from the movement of the spray equipment, or if hail damage has occurred.</p> <p>If sequential applications of Mamba® DMA 480 SL are necessary to control specific weeds which are variably controlled (such as <i>Cyperus esculentus</i>) or a new flush of weeds germinated after the first application, then at least 10 days must lapse between the first and second applications.</p> <p>Single in-crop applications of Mamba® DMA 480 SL should not exceed 2.2 L/ha. Up to two in-crop applications of maximum 2.2 L/ha per application may be done, providing a cumulative maximum of 4.4 L/ha Mamba® DMA 480 SL in one crop.</p>
	1.8-2.2 L/ha	Weeds 100-200 mm high or up to 12 leaf stage	

## **NOTES:**

- The above tank mix will provide residual weed control. Only one application of **SURESTART®** may be made per crop per season,
- Apart from one tank mix application only one other application of Mamba® DMA 480 SL alone may be made on a glyphosate tolerant maize crop, following directions in above-mentioned table.
- Failure to comply with the application directions regarding crop stage and method of application may result in serious crop injury.
- No application (broadcast or directed) must be made if mechanical crop damage will result from the movement of the spray equipment, or if hail damage has occurred.
- Do not apply the above tank mixture by means of a sleeve-boom sprayer.
- If a sequential application of Mamba® DMA 480 SL applied alone follows a tank mix application, then the two applications must have a time lapse of at least 10 days between them.
- Do not apply mixtures containing **SURESTART®** to glyphosate tolerant maize that has been treated with organophosphate products. Do not apply any organophosphate products for 6 weeks after a **SURESTART®** application.

## **SPRAYER CLEAN-UP**

To prevent any damage to subsequent crops, other than maize, all traces of **SURESTART®** must be removed from the mixing and spraying equipment. Proceed as follows:

- a) The spray tank should be drained immediately after spraying crops. Wash any contamination off the outside of the sprayer with clean water.
- b) The inside of the spray tank should be rinsed with clean water and flushed for 10 minutes with at least one tenth of the spray tank volume through the hoses and nozzles. Drain the tank completely.
- c) Half-fill the tank with clean water and add the correct quantity of cleaning agent. Per 100 litres of final tank volume, add 350 ml household ammonia (9.5 % ammonia) to the water, e.g., in the case of a 1 000 litres spray tank, fill with 500 litres water and add 3.5 litres (=10 x 0.35 L) household ammonia. The initial solution now prepared, which is double strength, should be mixed thoroughly by turning on the agitation. This solution is used for flushing the hoses and nozzles for approximately 1 minute. The remainder is then filled up to the final volume of the spray tank and allowed to stand for 15 minutes with the agitation running. After 15 minutes have elapsed, flush the boom and hoses again and drain the tank completely.
- d) Remove the nozzles and filters and allow to soak in a bucket containing 40 ml of household ammonia per 10 litres of water.
- e) Rinse the tank again with water and flush at least one tenth of the tank volume through the boom and hoses.
- f) Dispose of the wash water safely. Do not spray onto sensitive crops or land intended for planting with sensitive crops.

### **Precautions with spray clean-up**

Do not inhale the vapour of the cleaning agents.

Avoid contact with eyes and skin.

In case of contact with eyes and skin immediately rinse with plenty of clean water and seek medical advice.

Keep out of reach of children, uninformed persons, and animals.

Keep cleaning agents only in original containers.

## STORAGE AND DISPOSAL

### Storage conditions

Store away from sun, in original tightly closed containers, in a well-ventilated area apart from food and feedstuff under lock and key. Avoid storage above 35 °C.

### Product and container disposal

Do not re-use empty containers for any other purpose, especially not for storing water, food or feedstuff.

Dispose of surplus product and empty containers in an industrial incinerator approved for pesticides. Do not bury in or spray onto any area under agricultural use. Empty containers well, rinse several times with water and pour rinse solution in the spray tank.

### **The following trademarks and registrations under Act 36 of 1947 are acknowledged:**

Silwet L-77®  
Break-Thru®

Reg No. L 6145  
Reg No. L 6764

Chemtura Chemical (Pty) Ltd  
Evonik Degussa Africa (Pty) Ltd

**Local Emergency No: +27(0)82-895-0621 (SA only)**  
**24 Hour Emergency Tel No: +32-3-575-5555**  
**Information Hotline Tel No: +27(0)12 683-5700**

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## WAARSKUWINGS

### **RISIKOVERKLARINGS:**

Veroorsaak ligte velirritasie.  
Mag 'n allergiese velreaksie veroorsaak.  
Veroorsaak ernstige oogirritasie.  
Kan respiratoriese irritasie veroorsaak.  
Baie giftig vir waterlewe met langdurige effekte

**Mielies – Laat ten minste 120 dae toe tussen laaste toediening en oes van graan.  
Onthoudingsperiode vir voer/weiding – 28 days.**

Hanteer versigtig.  
Moet nie insluk nie.  
Kan matige oë irritasie veroorsaak.  
Velkontak mag matige irritasie veroorsaak met lokale rooiheid.  
Giftig vir visse en ander akwatiese organismes.  
Stoor weg van voedsel, voer, saad en ander landbou chemikalieë.  
Stoor op 'n koel, droë plek.  
Hou buite bereik van kinders, oningeligte persone en diere.

**HERBETREDING:** Moet nie behandelde gebied betree alvorens die spuitneerslag droog is nie, tensy beskermende oorklere gedra word.

### **VRYWARING:**

Alhoewel hierdie middel omvattend onder 'n groot verskeidenheid toestande getoets is, waarborg die registrasiehouer nie dat dit onder alle toestande doeltreffend sal wees nie, aangesien die werking en effek daarvan beïnvloed kan word deur faktore soos abnormale grond, klimaats- en bergingstoestande; kwaliteit van verdunningswater; verenigbaarheid met ander stowwe wat nie op die etiket aangedui is nie en die voorkoms van weerstand van die onkruid teen die betrokke middel sowel as die metode, tyd en akkuraatheid van toediening. Verder aanvaar die registrasiehouer nie verantwoordelikheid vir skade aan gewasse, plantegroei, die omgewing of vir nadelige effek op mens of dier of vir 'n gebrek aan prestasie van die betrokke middel as gevolg van die versuim van die gebruiker om etiketaanwysings na te kom of as gevolg van die ontstaan van toestande wat nie kragtens die registrasie voorsien kon word nie. Raadpleeg die verskaffer in die geval van enige onsekerheid.

## VOORSORGMAATREËLS

### **VOORSORG VERKLARINGS:**

Vermyn inaseming van spuitnewel of walms.  
Dra beskermende handskoene/beskermende klere/oogbeskerming/gesigskerm.  
Versamel verspilde produk.  
Raak ontslae van houer en/of inhoud in ooreenstemming met toepaslike regulasies.

Vermyn aanraking met die vel en oë. Dra rubberhandskoene, gesigmasker en beskermingsklere wanneer konsentreer hanteer word.  
Was besoedelde klere na gebruik.  
Was met seep en water na gebruik.  
Moet nie eet, drink of rook tydens vermenging of toediening van die produk of voordat hande en gesig gewas is nie.  
Vermyn spuitnewelwegdrywing na ander gewasse, weivelde, riviere, damme en plekke wat nie behandel moet word nie.

Maak alle meng- en toedieningsapparaat deeglik skoon na gebruik en voordat dit met ander produkte gebruik word (sien Skoonmaakinstruksies).

Spoel die leë houer drie keer uit met 'n volume skoon water gelykstaande aan 'n minimum van 10 % van die houer. Gooi die spoelwater by die inhoud van die spuitenk. Vernietig die leë houer op 'n veilige manier en moet dit vir geen ander doel hergebruik nie.

Voorkom besoedeling van voedsel, voer, drinkwater en eetgerei.

### **RELEVANTE STOWWE:**

<b>KOMPONENT</b>	<b>CAS No.</b>	<b>Konsentraat</b>
Acetochlor	34256-82-1	41.72
Furilazole	121776-33-8	0.98

### **SIMPTOME VAN MENSLIKE BLOOTSTELLING**

Mag matige oogirritasie tot gevolg hê.

Langdurige of herhaaldelike kontak mag gematigde velirritasie met lokale rooiheid veroorsaak in sommige individue.

### **NOODHULPBEHANDELING:**

Indien pasiënt bewusteloos is of stuiptrekkings het, moet geen vloeistowwe gee of braking teweegbring nie.

#### **Inname:**

Geen noodhulp mediese behandeling nodig nie.

#### **Oogkontak:**

Hou oë oop en spoel deeglik met skoon water vir 15-20 minute. Verwyder kontaklense, indien teenwoordig, na aanvanklik 5 minute en hou aan spoel. Indien nagevolge voorkom, moet 'n geneesheer geraadpleeg word, verkieslik 'n oogarts.

#### **Velkontak:**

Verwyder besoedelde klere. Spoel vel dadelik met seep en genoegsame water. Was besoedelde klere voor hergebruik.

#### **Inaseming:**

Verwyder pasiënt dadelik na vars lug. Raadpleeg 'n geneesheer.

### **NOTA AAN GENEESHEER:**

Daar is geen spesifieke teenmiddel nie. Ondersteunende sorg. Behandeling gebaseer op oordeel van dokter in reaksie op simptome van pasiënt.

### **WEERSTANDVOORKOMING EN BESTUUR**

**SURESTART**<sup>®</sup> is 'n samestelling van 'n sistemiese ouksien-tipe onkruiddoder (Groep O), 'n selverdelingsinhibeerder (Groep K<sub>3</sub>) en 'n onkruiddoder wat die ALS (**A**ceto**L**actate **S**ynthase) ensiem inhibering as metode van werking het (Groep B). Die produk onderbreek normale plantegroei en/of inhibeer die produksie van die ensiem wat noodsaaklik is vir die produksie van sekere aminosure vir normale plantegroei.

Weens natuurlike genetiese variasie in enige onkruidpopulasie, kan daar sommige onkruid-biotipes wat in die natuur voorkom, weerstandbiedendheid toon teen **SURESTART**<sup>®</sup> of ander ouksien-tipe onkruiddoders, selverdelingsinhibeerders asook ander onkruiddoders wat die ALS ensiem inhibeer. Indien onkruiddoders met dieselfde werkingswyse herhaaldelik gebruik word, kan hierdie weerstandbiedende individue uiteindelik die onkruidpopulasie domineer. Hierdie weerstandbiedende onkruid sal nie deur **SURESTART**<sup>®</sup> of ander ouksien-tipe onkruiddoders, selverdelings- of ALS inhibeerders beheer word nie.

## OM SELEKSIE VAN WEERSTANDBIEDENDE ONKRUIDE TE VERMINDER:

- ❖ Implementeer bewerkingspraktyke, wisselbou, meganiese of chemiese beheer metodes (insluitende die gebruik van nie-selektiewe onkruidodders) waar prakties moontlik.
- ❖ Vermyn die herhaalde gebruik van onkruidodders met dieselfde metode van werking. Beplan gewasrotasie sodat onkruidodders met verskillende metodes van werking gebruik word.
- ❖ Hou rekord van onkruidoddergebruik van elke land.
- ❖ Voorkom die verspreiding van weerstandbiedende saad asook vegetatiewe palntmateriaal na ander lande deur gereelde skoonmaak van stropers en ploë en plant van onkruidvrye saad.
- ❖ Met beweiding, begin by lande met die minste onkruidweerstand voor beweging na lande met hoë weerstand om verspreiding van saad deur diere te verhoed.
- ❖ Onderzoek alle lande jaarliks om moontlike weerstand vroegtydig uit te ken.

Kontak u plaaslike Corteva Agriscience verteenwoordiger vir verdere advies rakende die voorkoming van onkruidodder weerstandbiedendheid.

Indien bostaande maatreëls nie noudeset nagekom word nie, kan Corteva Agriscience geen aanspreeklikheid aanvaar ten opsigte van enige verlies wat mag ontstaan indien **SURESTART®** nie weerstandbiedende onkruid beheer nie.

## GEBRUIKSBEPERKINGS

- Moet nie **SURESTART®** op mielies gebruik in kombinasie saam met organofosfaat insekdodders soos bv. in 'n tenkmengsel saam met organofosfaat insekdodders of waar 'n organofosfaat insekdoder op die grond toegedien was met plant of waar die gewassaad met 'n organofosfaat insekdoder behandel is of waar 'n organofosfaat insekdoder alreeds toegedien is met na-opkoms van die mieliegewas nie.
- Moet nie **SURESTART®** toedien op mielies wat onder stremming verkeer a.g.v. strawwe weerstoestande (koue weer, swaar reën of ysige temperature), droogte, versuipptoestande, nutriënt tekort, siekte, insekskade of onkruidodder oordraging nie.
- Moenie **SURESTART®** tenkmengsels toedien op ingeteelde ouerplante van gewaskultivars, asook proef of nuutvrygestelde kultivars/variëteite sonder om eers die vervaardiger, verspreider of saadmaatskappy in hierdie verband te raadpleeg nie.
- Dien die produk streng volgens die gebruiksaanwysings toe.
- Moet nie enige waterbronne besoedel nie bv. damme, riviere, boorgate, ens.
- **SURESTART®** mag slegs **EEN** keer per seisoen toegedien word.
- Moet nie as 'n lugbespuiting gebruik nie.
- Moet nie **SURESTART®** deur enige tipe besproeiingsstelsel toedien nie.
- Moenie **SURESTART®** deur vloedbesproeiing toedien of inkorporeer nie, behalwe moontlike gewasskade, mag die mate van onkruidbeheer ook verlaag word.
- Moenie **SURESTART®** toedien op droë grond na plant en dan oorhoofse besproeiing gebruik nie.
- Moet **SURESTART®** glad nie op lande gebruik waar die gewasrotasiebeperkings op die etikette van enige voorafgaande onkruidodders (bv. triasienes en sulfonielureums) wat voorheen op dieselfde lande gebruik is nie, nie ten volle nagekom is nie,.
- Moenie **SURESTART®** voor-opkoms toedien op gewasse op gronde met 'n pH (H<sub>2</sub>O) van 7.0 of hoër nie, omrede 'n geassosieerde hoër biotoeganklikheid van onkruidodder die moontlikheid van gewasskade mag verhoog. Hou ook hierdie pH beperking in gedagte wanneer daar beplan word om grond pH te verhoog met bekalking op lande waar die gebruik van **SURESTART®** ook beplan word.

Toestande soos hieronder gelys mag gewasskade deur **SURESTART®** en/of onvoldoende onkruidbeheer veroorsaak:

- Swak gedreineerde gronde of gronde met 'n verdigte laag. Versuiptoestande in die teenwoordigheid van onkruidodders sal tot verminderde stand en/of vertraagde groei lei wat oesverlies tot gevolg mag hê.
- Gronde met 'n pH (H<sub>2</sub>O) van 7 en meer.
- Gronde met 'n pH (H<sub>2</sub>O) van laer as 5 en/of organiese materiaal inhoud van hoër as 3 % mag moontlike swak onkruidbeheer teweeg bring.
- Toestande van baie reën en/of besproeiing op sanderige of gruiserige gronde.
- Uitgerekte of abnormale koue en/of nat toestande.
- Plante onder stres as gevolg van faktore soos swak gewasvoeding, aalwurm infestaties, siektes, droogtes ens.
- Moenie **SURESTART®** op saadmilies, springmilies en ander eksotiese kultivars gebruik nie.

Wanneer tenkmengsels saam met Mamba® DMA 480 SL gemaak word, moet die waarskuwings, voorsorgmaatreëls, gebruiksbepenkings en gebruiksaanwysings soos vermeld op die Mamba® DMA 480 SL etiket, sorgvuldig nagekom word.

## MINIMUM WAGPERIODES EN WISSELBOU-AANWYSINGS

Die minimum wagperiode dui op die tydsverloop vanaf die laaste toediening van **SURESTART®** tot die verwagte tyd van aanplanting van 'n opvolggewas. Die intervalle hieronder gespesifiseer, sal slegs geldig wees indien gunstige grondvog- en temperatuurtoestande, wat versnelde afbraak van **SURESTART®** deur mikrobiële aktiwiteit bevorder, sou heers. Abnormale droë en/of koue toestande mag stadiger afbraak teweegbring.

Deeglike oorweging moet gegee word aan wisselboubepanning alvorens **SURESTART®** gebruik word.

Om skade aan opvolggewasse te voorkom, moet die volgende wagperiodes in ag geneem word:

Opvolggewasse	Wagperiodes
Mielies	Geen
Koring	4 maande
Aartappels, droë bone, grondbone, sojabone, sonneblomme, sorghum	9 maande
Gars, hawer	12 maande

Om skade aan alle ander opvolggewasse te vermy, word 'n wagperiode van ten minste **24 maande** aanbeveel, voorafgegaan deur 'n toetsplanting. Toetsstrokke van die verlangde opvolggewas moet aangeplant word en tydens ontkieming en opkoms gekontroleer word vir enige abnormale groei om te bepaal of die opvolggewas suksesvol verbou kan word.

Bogenoemde wagperiodes geld slegs indien die korrekte hoeveelheid **SURESTART®** alleen of in kombinasie met Mamba® DMA 480 SL per grondsoort toegedien is op gronde met 'n pH (H<sub>2</sub>O) van minder as 7 en normale of bogemiddelde reënval gedurende die seisoen waarin die toediening gemaak is en daarna voorgekom het.



## SOMMIGE ONKRUIDE WAT NORMAALWEG DEUR SURESTART® BEHEER WORD:

### Voor-opkoms

#### **Breëblaaronkruid**

<i>Acanthospermum hispidum</i>	regop sterklits
<i>Amaranthus hybridus</i>	gewone misbredie
<i>Amaranthus spinosus</i>	doringmisbredie
<i>Bidens pilosa</i> **	gewone knapsekêrel
<i>Chenopodium album</i>	withondebossie
<i>Chenopodium carinatum</i>	groenhondebossie
<i>Cleome monophylla</i> **	Rusperbossie
<i>Commelina benghalensis</i> **	Bengaalse wandelende Jood
<i>Datura ferox</i>	groot stinkblaar
<i>Galinsoga parviflora</i>	knopkruid
<i>Gynandropsis gynandra</i>	snotterbelletjie
<i>Portulaca oleracea</i>	Porslein
<i>Richardia brasiliensis</i> **	tropiese Richardia
<i>Schkuhria pinnata</i>	klein kakiebos
<i>Tagetes minuta</i> **	Kakiebos
<i>Tribulus terrestris</i>	Dubbeltjie

#### **Grasse**

<i>Brachiaria eruciformis</i>	litjiesinjaalgras
<i>Chloris virgata</i>	witpluim-Chloris
<i>Digitaria sanguinalis</i> **	kruisvingergras
<i>Echinochloa crus-galli</i>	hanepootmanna
<i>Eleusine coracana (indica)</i>	Jongosgras
<i>Panicum maximum</i>	gewone buffelsgras
<i>Panicum schinzii</i>	soetbuffelsgras
<i>Setaria pallide-fusca</i>	rooiborselgras
<i>Setaria verticillata</i>	klitsborselgras
<i>Tragus racemosus</i>	grootwortelsaadgras
<i>Urochloa panicoides</i>	beesgras

#### **Uintjies**

<i>Cyperus esculentus</i> **	Geel uintjie
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\*\*Wisselvallige beheer kan verwag word.

Die beheer van bogenoemde onkruid mag nadelig beïnvloed word onder die volgende toestande:

- Swak voorbereide saadbed.
- Gronde met 'n pH (H<sub>2</sub>O) van minder as 5 en 'n organiese materiaal inhoud van meer as 3 %.
- Droë toestande direk na toediening of onvoldoende reënval op swaar gronde.
- Waar gronderosie voorkom as gevolg van oormatige reën of besproeiing of wind erosie, kan bydra tot swak onkruidbeheer.

## Vroeg na-opkoms met SURESTART® alleen (1-2 ware blaarstadium van onkruid)

### Breëblaaronkruid

<i>Amaranthus hybridus</i>	gewone misbredie
<i>Bidens pilosa</i> **	gewone knapsekêrel
<i>Boerhavia diffusa</i>	Boerhavia
<i>Cleome monophylla</i>	Rusperbossie
<i>Commelina benghalensis</i> **	Bengaalse wandelende Jood
<i>Cucumis myriocarpus</i>	wilde komkommer
<i>Datura ferox</i>	groot stinkblaar
<i>Emex australis</i> **#	Kaapse dubbeltjie
<i>Hibiscus cannabinus</i> **	Wildestokroos
<i>Portulaca oleraceae</i>	Porslein
<i>Tagetes minuta</i> **	Kakiebos
<i>Tribulus terrestris</i>	Dubbeltjie
<i>Xanthium strumarium</i> **	Kankerroos

\*\* Wisselvallige beheer kan verwag word.

# Groeistadium van *Emex* moet nie die 2 ware blaarstadium oorskry nie (1<sup>ste</sup> ware blare na die saadlob blare). Onkruid groter as gespesifiseer (of onkruid beïnvloed deur stres of beweiding voordat behandeling geskied), sal terug sterf, maar hergroei van die wortelkroon mag gebeur, met daaropvolgende blom- en saadproduksie.

### Vroeg na-opkoms tenkmengsel saam met Mamba® DMA 480 SL

Verwys na onkruid en dosisse soos gelys op die Mamba® DMA 480 SL etiket wanneer **SURESTART®** in 'n tenkmengsel saam met Mamba® DMA 480 SL gebruik word.

Graad van beheer verkry en die duurte van die effek hang af van die onkruidspesie, onkruidgrootte en groeitoestande gedurende en na die toediening.

### NOTA:

**SURESTART®** beheer sekere onkruidspesies soos gelys hierbo. Ander eenjarige grasse en breëblaaronkruid wat nie tydens die ontwikkelingsproewe voorgekom het nie, kan ook moontlik tot 'n sekere mate beheer word. Die registrasiehouer aanvaar egter geen aanspreeklikheid ten opsigte van ongelyste onkruid nie.

### GEBRUIKSAANWYSINGS: Gebruik slegs soos aangedui.

#### ALGEMENE INLIGTING

**SURESTART®** is 'n sistemiese suspensie emulsie onkruiddoder vir die gebruik as 'n voor- of vroeg na-opkoms behandeling of as 'n vroeg na-opkoms toediening in 'n tenkmengsel saam met Mamba® DMA 480 SL vir die beheer van eenjarige breëblaaronkruid en sommige eenjarige grasse in mielies in die Somer reënval gebied.

**SURESTART®** moet met skoon water gemeng word en as 'n eenvormige, voor- of vroeg na-opkoms, breedwerpig grondbespuiting toegedien word.

**SURESTART®** as 'n vroeg na-opkoms toediening, moet altyd in 'n tenkmengsel saam met 'n nie-ioniese adjuvant soos Break-Thru® of Silwet L-77® gebruik word. Die adjuvant moet as die laaste bestanddeel tot die tenkmengsel bygevoeg word. In die geval van 'n tenkmengsel saam met Mamba® DMA 480 SL, word 'n adjuvant slegs benodig indien daar minder as 1.1 % Mamba® DMA 480 SL in die spuitmengsel is.

Om die maksimum vroeg na-opkomsbeheer van onkruid te verkry, dien **SURESTART®** toe saam met Mamba® DMA 480 SL op jong onkruid in die saailingstadium (verwys na Mamba® DMA 480 SL etiket vir aanbevelings). Onkruid moet aktief groei onder vogtige toestande. Onkruid wat onder droogtestremming verkeer, mag minder gevoelig wees.

**SURESTART®** in 'n tenkmengsel saam met Mamba® DMA 480 SL as 'n vroeg na-opkoms behandeling, mag slegs op mielies gespuit word wat die glifosaat verdraagsaamheidsgeen bevat. **Verwys altyd na die Mamba® DMA 480 SL etiket vir aanbevole dosisse en gewasstadiums.**

Enige individuele plante wat nie die glifosaat verdraagsaamheidsgeen bevat nie, sal vrek wanneer dit met glifosaat gebasseerde produkte bv. Mamba® DMA 480 SL, gespuit word. Uiterste voorsorg moet getref word om nie die tenkmengsel op nie-glifosaat verdraagsame mielies te spuit nie. Volg die etiket aanwysings vir die toediening van die tenkmengsel op glifosaat verdraagsame mielies soos beskryf op die Mamba® DMA 480 SL etiket.

## VERENIGBAARHEID

**SURESTART®** is verenigbaar met die volgende produkte in 'n tenkmengsel:

- Mamba® DMA 480 SL L 8388
- Silwet L-77® L 6145 Chemtura Chemical (Pty) Ltd
- Break-Thru® L 6764 Evonik Degussa Africa (Pty) Ltd

## VERWYS ALTYD NA DIE PRODUKETIKET.

NOTAS:

- (i) **WAAR EEN VAN DIE BOGENOEMDE PRODUKTE MET SURESTART® IN 'N TENKMENGSEL GEBRUIK WORD, MOET VOLLEDIGE INLIGTING VAN DIE BETROKKE ETIKET VERKRY EN NAGEVOLG WORD.**
- (ii) Die verenigbaarheid van **SURESTART®** in tenkmengsels met aanbevole produkte, kan beïnvloed word deur die formulering van hierdie produkte. Die kwaliteit van die water kan ook 'n effek hê op hierdie tenkmengsels. Aangesien die formulering van aanbevole produkte kan verander sonder die medewete van Corteva Agriscience RSA (Edms) Bpk en die kwaliteit van die water ook van plaas tot plaas kan varieer, moet 'n fisiese verenigbaarheidstoets altyd uitgevoer word voordat dit gespuit word. Corteva Agriscience RSA (Edms) Bpk aanvaar geen verantwoordelikheid vir gewas verdraagsaamheid van hierdie tenkmengsels waar die formulering van produkte verander het of vir mengsels met produkte wat nie hierbo genoem word nie.

Vir verdere inligting, raadpleeg u plaaslike verteenwoordiger.

## MENGINSTRUKSIES

**Alleen gebruik** – voeg die aanbevole hoeveelheid van **SURESTART®** tot die spuittenk wanneer die tenk halfvol is en voeg dan die res van die water by die tenk. Laat genoegsame tyd toe vir die deeglike dispersie/menging voor toediening.

**Tenkmengsel saam met Mamba® DMA 480 SL** – voeg die produkte tot die tenkmengsel in die volgende orde:

- Vul die spuittenk halfvol met skoon water. Begin met roering.
- Voeg ammonium sulfaat by teen die aanbevole dosis.
- Voeg die nodige hoeveelheid **SURESTART®** tot die spuittenk. Laat genoegsame tyd toe vir die deeglike dispersie/menging voordat enige ander produkte tot die spuittenk gevoeg word.
- Voeg die aanbevole hoeveelheid by van Mamba® DMA 480 SL.
- 'n Geregistreerde nie-ioniese benatter word dan laaste by die spuitmengsel gevoeg slegs indien daar minder as 1.1 % Mamba® DMA 480 SL in die mengsel is.
- Vul die tenk verder met water tot die verlangde volume bereik word. Die spuitmengsel moet tydens vermenging en toediening voortdurend deeglik in roering gehou word.
- Tenkmengsels moet onmiddellik uitgespuit word en nie toegelaat word om in die spuittenk te staan nie aangesien die effektiwiteit mag afneem vanweë produkafbraak.
- Roer deeglik voor hergebruik as daar 'n onderbreking is tydens die toedieningsproses vir watter rede ookal.

## GRONDTOEDIENING

**SURESTART®** alleen of in tenkmengsels saam met Mamba® DMA 480 SL, kan toegedien word met enige medium- of hoëvolume spuittoerusting wat met 'n doeltreffende roermeganisme toegerus is en wat goeie bedekking en eweredige verspreiding verseker. Die beste resultate word verkry deur van platwaaierspuitpunte gebruik te maak en 'n minimum spuitvolume van 200 liter water per hektaar toe te dien.

Onkruid wat deur ander onkruid of die gewas afgeskerm word, mag onvolledig bedek word en tot wisselvallige beheer aanleiding gee. Dit moet deeglik in ag geneem word by die tydsberekening van **SURESTART®** toediening. Optimale beheer word verkry met voor- of vroeg na-opkoms (1-2 ware blaarstadium) behandeling van onkruid wanneer daar genoegsame grondvog is.

## Na-plant voor-opkoms

Wanneer in klam grond geplant word, moet **SURESTART® binne drie dae na plant** (maar verkieslik tydens plant) op 'n relatiewe fyn, egalige, ferm en vars voorbereide saadbed, vry van onkruid, oormatige plantreste en groot kluite, toegedien word. Die onkruiddoder-mengsel moet nie later as drie (3) dae toegedien word na die finale bewerking vir saadbedvoorbereiding. Afwyking van die voorafgenoemde saadbedtoestande en/of die voorgeskrewe toedieningstyd mag minder effektiewe onkruidbeheer tot gevolg hê. Om goeie resultate te verkry, is dit ook noodsaaklik dat die onkruiddodertoediening binne sewe (7) dae gevolg moet word deur 12-15 mm reën of besproeiing voordat die onkruid opkom. Indien reën nie betyds voorkom nie en die onkruid begin opkom en ontwikkel, moet 'n vlak grondbewerking uitgevoer word om hierdie onkruid te vernietig en die onkruiddoder met die boonste 10-20 mm grondlagie te vermeng. Bewerkingstoerusting wat verstel is om vlak te loop en om grondbeweging te minimaliseer, sal die waarskynlikheid van verdunning of verwydering van die onkruiddoder vanuit die onkruidbeheer sone, verminder. Die gebruik van 'n roltandeg in dieselfde rigting as die plantrye mag gewasopkoms bevorder indien grondkorsvorming 'n probleem is, weereens minimaliseer beweging van grond. Om moontlike gewasstremming as gevolg van onvoldoende voeding te vermy en om kragtige, aanvanklike gewassaailing groei te bevorder, sorg dat voldoende kunsmis tydens plant naby die saad geplaas word.

**Moet nie SURESTART®** toedien deur enige tipe besproeiing nie. Gebruik slegs oorhoofse besproeiing vir inwerking na toediening.

**SURESTART®** dosisse vir alleen gebruik of in 'n tenkmengsel saam met Mamba® DMA 480 SL:

<b>% Klei</b>	<b>SURESTART® (L/ha) vir algehele toedienings</b>
<b>11-20</b>	1.5 – 2.0
<b>21-30</b>	2.1 – 2.5
<b>31-40</b>	2.6 – 3.0

**NOTA:**

BYVOEGMIDDELS: Die aktiwiteit van **SURESTART®** word verhoog deur die gebruik van byvoegmiddels soos Break-Thru® of Silwet L-77®. Dit lewer meer konstante beheer van vatbare onkruid onder verskeie omgewingstoestande. Byvoegmiddels sal ook effektiwiteit teen onkruid wat matig vatbaar is, verbeter. Byvoegmiddels is veral voordelig onder droë toestande.

Vroeg na-opkoms toedienings van **SURESTART®** moet in tenkmengsel saam met 'n geskikte byvoegmiddel soos aangedui, gemeng word. Gebruik die aanbevole dosis soos op die spesifieke byvoegmiddel etiket aangedui word.

### **SLEGS glifosaatverdraagsame mielies (Verminderde bewerking saadbed).**

Wanneer **SURESTART®** saam met Mamba® DMA 480 SL in 'n tenkmengsel gebruik word, verwys altyd na Mamba® DMA 480 SL se etiket vir aanbevole dosisse per onkruidspesie.

In minimum- of geen-bewerkingstelsels, waar onkruid reeds opgekrom het en teenwoordig is teen die tyd van toediening, kan Mamba® DMA 480 SL in 'n tenkmengsel saam met **SURESTART®** gebruik word.

Let daarop dat 12-15 mm reën of besproeiing binne sewe (7) dae na toediening nodig is om die residuele grondwerking van **SURESTART®** te aktiveer op nuwe opkomende onkruid.

Onvoldoende onkruidbeheer van **SURESTART®** kan voorkom as die digtheid van plantreste op die grondoppervlak hoog is en/of as daar hoë onkruiddruk is. Dit sal die grondwerkende onkruidodders afskerm waar dit dan nie in kontak kom met die grond oppervlakte nie.

Die na-opkoms effek van Mamba® DMA 480 SL op kleiner onkruid kan ook verminder word indien hulle deur digte plantreste en/of groter onkruid van die spuitstof afgeskerm word.

Raadpleeg eers die verskaffer voor toediening in sulke situasies.

Reën binne ses ure na toediening van voorafgenoemde tenkmengsel kan die effektiwiteit van Mamba® DMA 480 SL verlaag. 'n Opvolgbespuiting van Mamba® DMA 480 SL sal benodig word vir onkruidbeheer.

## SLEGS GLIFOSAATVERDRAAGSAME MIELIES (Vroeg na-opkoms)

SURESTART® in 'n tenkmengsel saam met Mamba® DMA 480 SL.

GEWAS	MAMBA® DMA 480 SL DOSIS/ha	ONKRUIDSTADIUM	TOEDIENINGS- EN GEWASSTADIUMS EN BELANGRIKE NOTAS
Glifosaat- verdraagsame mielies	1.5 L/ha	Klein onkruide (minder as 100 mm hoog of tot by 8 blaarstadium)	Breedwerpig na-opkoms op mieliegewas vanaf opkoms tot by die V8 stadium (V8 stadium word bereik sodra die eerste plante 8 blare met blaarskedes volledig toegevou om die hoofstam het).
	1.8-2.2 L/ha	Onkruide vanaf 100–200 mm hoog of tot by die 12 blaarstadium	<p>Breedwerpige toediening van Mamba® DMA 480 SL op mielies na die V8 stadium mag opbrengsverlies tot gevolg hê.</p> <p>Sodra mielies verby die V8 stadium is, moet 'n gerigte toediening van Mamba® DMA 480 SL met valarms gedoen word. Dit is om spuitmengsel binne in die kelk en op die reprodktiewe dele te vermy, asook om optimum bedekking op onkruide te verseker.</p> <p>Moet nie Mamba® DMA 480 SL toedien, algeheel of gerig, as meganiese gewasskade voorkom of deur beweging van spuitapparaat veroorsaak sal word nie of indien haelskade voorkom.</p> <p>Indien opvolgbespuitings met Mamba® DMA 480 SL nodig is om onkruide te beheer wat wisselvallig beheer is (soos bv. <i>Cyperus esculentus</i>) of nuwe onkruide wat ontkiem het na die eerste bespuiting, dan moet ten minste 10 dae tussen die eerste en tweede bespuitings verloop.</p> <p>Enkele toedienings van Mamba® DMA 480 SL op die gewas moet nie 2.2 L/ha oorskry nie. Tot twee toedienings van 'n maksimum van 2.2 L/ha per toediening kan toegedien word, mits 'n maksimum kumulatiewe dosis van 4.4 L/ha in een gewas nie oorskry word nie.</p>

## **NOTAS:**

- Bostaande tenkmengsel sal residuele onkruidbeheer verskaf. Slegs een toediening van **SURESTART®** per gewas per seisoen mag toegedien word.
- Behalwe vir een tenkmengsel toediening, mag slegs een ander toediening van Mamba® DMA 480 SL alleen op 'n glifosaat verdraagsame mieligewas toegedien word, volgens bogenoemde tabel.
- Versuim om die toedieningsaanwysings aangaande gewasstadium en toedieningsmetode na te kom, mag ernstige gewasskade tot gevolg hê.
- Geen toediening (breedwerpig of gerig) moet gemaak word indien meganiese gewasskade deur beweging van spuitapparaat veroorsaak sal word, of indien haelskade voorkom nie.
- Moet nie bostaande tenkmengsel deur middel van 'n kousbalkspuit toedien nie.
- Daar moet ten minste 10 dae verloop tussen twee toedienings waar Mamba\* DMA 480 SL alleen na 'n tenkmengsel toegedien is.
- Moet nie mengsels wat **SURESTART®** bevat aan glifosaat verdraagsame mielies, wat met organofosfaat produkte behandel is, toedien nie. Moet geen organofosfaat produkte vir 6 weke na 'n **SURESTART®** toediening toedien nie.

## **SKOONMAAK VAN SPUIT**

Om daaropvolgende skade aan gewasse anders as mielies te vermy, moet alle residue van **SURESTART®** direk na toediening, deeglik vanuit die meng- en spuittoerusting verwyder word. Gaan soos volg te werk:

- a) Dreineer die spuitsisteam onmiddellik na bespuiting van gewas. Was enige kontaminasie van die buitekant van die tenk af met skoon water.
- b) Spoel die binneoppervlak van die tenk met skoon water. Spuit ten minste een tiende van die tenk se kapasiteit deur die pype en spuitpunte. Dreineer die tenk deeglik.
- c) Maak die tenk half vol met skoon water en voeg die korrekte hoeveelheid skoonmaakmiddel by. Vir elke 100 liter van die finale tenk volume, voeg 350 ml huishoudelike ammoniak (9.5 % ammoniak), in die water. (bv. in die geval van 'n 1 000 liter spuittenk, vul dit met 500 liter water en voeg 3.5 liter (=10 x 0.35 L) huishoudelike ammoniak by).  
Die oorspronklike mengsel, wat nou dubbel-sterkte is, moet deeglik geroer word en deur die pype en spuitpunte vir ongeveer 1 minuut gespoel word.

Voeg dan water by die oorblywende mengsel tot die tenk vol is. Laat hierdie mengsel 15 minute in die tenk staan terwyl roering plaasvind. Na die verloop van 15 minute, spuit weer deur die pype en spuitpunte. Dreineer die tenk deeglik.

- d) Verwyder spuitpunte en siwwe en plaas in 'n emmer wat 40 ml huishoudelike ammoniak per 10 liter water bevat.
- e) Spoel die tenk weer deeglik uit met skoon water. Spuit ten minste een tiende van die tenk se kapasiteit deur die pype en spuitpunte.
- f) Spuit alle spoelwater veilig weg. Moet nie op sensitiewe gewasse of op lande bedoel vir die plant van sensitiewe gewasse, spuit nie.

## Voorsorgmaatreëls met skoonmaak van spuit

- Moet nie die dampe van die skoonmaakmiddel inasem nie.
- Vermy kontak met oë en vel.
- In geval van kontak met oë en vel, spoel onmiddellik met genoegsame water en verkry mediese raad.
- Hou buite bereik van kinders, oningeligte persone en diere.
- Hou skoonmaakmiddels slegs in die oorspronklike houers.

## **BERGING EN VERNIETIGING**

### Bergingstoestand

Berg weg van sonlig en vogtigheid, in oorspronklike houers wat dig toegemaak is, in 'n goed geventileerde area, weg van kos en voer agter slot en grendel. Vermy berging bo 35 °C.

### Produk -en houervernietiging

Moet nie die houers her-gebruik vir enige ander doel nie, veral nie vir die stoor van water, kos en voer nie.

Vernietiging van oortollige produk en leë houers moet geskied deur 'n industriële verbrandingsoond wat vir chemikalieë goedgekeur is. Moet dit nie begrawe of spuit op enige gebied wat onder landboukundige gebruik is nie. Leë houers moet deeglik met skoonwater uitgespoel word. Gooi hierna die spoeloplossing in die spuitenk.

### **Die volgende handelsmerke en registrasies onder Wet 36 van 1947 word erken:**

Silwet L-77®  
Break-Thru®

Reg No. L 6145  
Reg No. L 6764

Chemtura Chemical (Pty) Ltd  
Evonik Degussa Africa (Pty) Ltd

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