



RIVAL SC

BEFORE USING THIS PRODUCT, READ THE LABEL CAREFULLY

VERWYS NA BESONDERHEDE SOOS OP HOUER / SAK GEDRUK

GEBRUIKSAANWYSINGS INGESLUIT

Lotnummer
Datum van vervaardiging

RIVAL SC
HERBICIDE

Reg. No. L7363, Act/Wet No. 36 of/van 1947

1: 24/07/2003

A suspension concentrate herbicide for the pre- and early post-emergence control of most annual grasses and broadleaf weeds in the crops as indicated.

'n Suspensiekonsentraat onkruidodder vir die voor- en vroeëna-opkomsbeheer van eenjarige grasse en breëblaaronkruid in die gewasse soos aangedui.

HRAC HERBICIDE GROUP CODE	K3;C1;C1	HRAC ONKRUIDDODER GROEPKODE
ACTIVE INGREDIENTS / AKTIEWE BESTANDELE		
Acetochlor (chloroacetanilide)	150 g/ℓ	Asetochloor (chloorasetanilied)
Atrazine (triazine)	225 g/ℓ	Atrasien (triasien)
Terbutylazine (triazine)	225 g/ℓ	Terbutielasien (triasien)

Registration Holder / Registrasiehouer
Meridian Agrochemical Company (Pty.) Ltd. / (Edms.) Bpk.
 Reg. No. 2000/010819/07
 P.O. Box / Posbus 436, Modderfontein, 1645, South Africa / Suid-Afrika

DIRECTIONS FOR USE ENCLOSED REFER TO DETAILS AS PRINTED ON CONTAINER / BAG

Batch Number
Date of manufacture

20ℓ

UN Number: 2998

HARMFUL / SKADELIK

WARNINGS

- Poisonous if swallowed.
- Toxic to fish.
- Store under lock and key in a cool place.
- Store away from food, feed, fertilizer and other agricultural products.
- Keep out of reach of children, uninformed persons and animals.
- In case of poisoning call a doctor and show him this label.
- **Aerial application:** Notify all inhabitants in the immediate vicinity of the area to be sprayed and issue the necessary warnings. Do not apply over water bodies and ensure that spray drift will not contaminate areas under treatment.

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 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 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 crops, 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 the registration. Consult the supplier in the event of any uncertainty.

PRECAUTIONS

- Do not inhale fumes or spray mist.
- Avoid skin and eye contact by wearing protective clothing when mixing the product.
- In case of accidental eye contact, flush with plenty of water and get medical attention if necessary.
- Wash with soap and water after use and accidental skin contact as well as contaminated clothing.
- Do not eat, drink or smoke while mixing or applying the product or before washing hands and face.
- Do not mix and load within at least 15 m from boreholes, streams, rivers and dams.
- Do not apply within at least 15 m from boreholes, streams and rivers.
- Do not apply within 60 m of dams.
- Ensure that no back-siphoning to boreholes or dams takes place when the product is applied through the irrigation system.
- Avoid drift of spray onto other crops, grazing, rivers, dams and areas not under treatment.
- Clean applicator after use. Dispose of rinsate where it will not contaminate crops, grazing, rivers, dams and boreholes.
- Prevent contamination of food, feeds, drinking water and eating utensils.
- Invert the empty container over the spray or mixing tank and allow to drain for at least 30 seconds after the flow has slowed to a drip. Thereafter rinse the empty container three times with a volume of water equal to a minimum of 10% of that of the container. Add the rinsings to the contents of the spray/mixing tank before destroying the empty container by perforation and flattening.
- Destroy the empty container and do not use for any other purpose.

SYMPTOMS OF HUMAN POISONING

Irritation effects on skin and mucous membranes are the common reactions. May cause eye irritation. May cause skin irritation and allergic reaction. May cause skin sensitisation. If large quantities are ingested, nausea, vomiting abdominal distress and diarrhoea may occur.

FIRST AID TREATMENT

Skin contact: Remove contaminated clothing as well as shoes and leather goods. Wash body with non-abrasive soap and lots of water. Persons providing first aid must wear gloves to avoid self-contamination. Seek medical advice if necessary.

Eye contact: Flush eyes immediately with large amounts of clean water for approximately 15 minutes. Occasionally lift the upper and lower lids. If eye irritation persists, get medical attention.

Inhalation: Remove patient to a well ventilated area and loosen clothing around the neck. Perform artificial respiration and administer oxygen if necessary. Keep patient warm and calm. **Seek medical advice immediately.**

Ingestion: Do not induce vomiting. Get medical attention immediately. Administration of gastric lavage or oxygen should be performed by qualified medical personnel.

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 – 60 g activated charcoal in 150 – 300 ml water.

USE RESTRICTIONS

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

a)	Maize and sugarcane	Nil
b)	Grain sorghum	6 months
c)	Sunflowers, groundnuts, soybeans, potatoes, dry beans, forage sorghum and small grains	18 months
d)	All other crops (a test planting is recommended in all cases)	24 months

NB: The above mentioned waiting periods are only valid if the correct **Rival SC** dosage rate, according to soil type was applied and normal or above average rainfall occurred after **Rival SC** application. When applied to soils which expand on wetting and crack or crumble on drying out, such as turf soils, triazines in this product may remain active in the soil for much longer than the above mentioned waiting periods. Therefore **Rival SC** should not be used on such soils if sensitive crops might be planted in the foreseeable future. On such soils poor weed control may also be experienced when applied pre-emergence.

- Do not use **Rival SC** to inbred parent plant lines, nor on experimental or newly released cultivars/varieties without first consulting with your supplier or with the seed company concerned.
- **Prefix S EC** and alachlor EC should not be added as a tank mixture on poorly drained soils.
- Do not use **Rival SC** on poorly drained soils or soils with a compaction layer, as under these conditions waterlogging can occur and the herbicide may cause crop injury.
- Do not apply **Rival SC** to any crop or situation not mentioned in this instruction leaflet.
- Only apply **Rival SC** using an accurate and safe application technique.
- Flood irrigation can reduce weed control performance.
- Optimum weed control is obtained on a fine even seedbed, free of clods, trash and weeds. **Rival SC** will also give weed control in stubble mulch or minimum tillage situations.
- If **Rival SC** is used in a tank mix with other recommended herbicides, consideration should be given to the restrictions of those respective products.
- Dosage rates and spray volumes should be adjusted for on the row band treatments.
- Low temperatures and/or heavy continuous rain directly after planting and application may cause injury such as poor germination and stunting of the crop. Planting too deep may further increase injury to the crop. Certain cultivars are known to be sensitive to herbicides. In cases of uncertainty, please consult your seed supplier.
- Ensure that sufficient fertiliser is placed near the seed at planting to promote vigorous seedling growth. This is especially important with early planting when the soil temperature is relatively low accompanied with continuous moist conditions.

RESISTANCE WARNING

For resistance management, **Rival SC** is a group code K3/C1 herbicide. Any weed population may contain individuals naturally resistant to **Rival SC** and other group code K3/C1 herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds may not be controlled by **Rival SC** or any other group code K3/C1 herbicide.

To delay herbicide resistance:

- Avoid exclusive repeated use of herbicides from the same herbicide group code. Alternate or tank mix with registered products from different herbicide group codes.
- Integrate other control methods (chemical, cultural, biological) into weed control programmes.

For specific information on resistance management contact the registration holder of this product.

DIRECTIONS FOR USE

Use only as directed

MIXING INSTRUCTIONS

Half-fill the spray tank with suitable water, then add the required amount of **Rival SC** to the water in the tank while agitating. Fill the spray tank to the desired volume. Agitate well to ensure thorough mixing before application. Should tank mixtures with other herbicides be made, follow the respective manufacturers' label recommendations. When **Prefix S EC** and/or alachlor EC are added as a tank mixture, they should be added to the tank last, just prior to the final water being added. **Tank mixtures must be sprayed out immediately and not allowed to stand in the spray tank overnight.** Spraying equipment must be thoroughly flushed out at the end of the spraying operation.

COMPATIBILITY

The compatibility of **Rival SC** with other products depends on the formulations of the respective products as well as the quality of the spray water to be used. As formulations change from time to time it is recommended that a physical compatibility test be done prior to the tank mixture being made. **Rival SC** is compatible with **Prefix S EC** and alachlor EC.

APPLICATION METHODS

Ensure that the equipment is correctly calibrated and is checked regularly during application to ensure even and accurate application. Tractor mounted boom sprayers may be used. A spray volume of 200300 l/ha should be used and can be applied via flat fan-type nozzles, preferably the low drift type to avoid fine droplets. **Constant agitation throughout the spray operation is essential.** Only clean water should be used. Whenever **Rival SC** is applied post-emergence of weeds, a suitable adjuvant must be added.

For optimum weed control, seedbed preparation should take place within 3 days prior to planting, followed immediately by application of the recommended quantity of **Rival SC** or mixtures thereof and then 10 – 15 mm of rain or irrigation. Rain or irrigation is essential to leach the product into the zone of the germinating weeds. Under drier conditions, weeds may emerge. These should be controlled with either a shallow cultivation, which will also incorporate the herbicide into the upper 10 – 20 mm of soil. As a pre-emergence treatment **Rival SC** must be applied directly after or during planting, but not later than three days after planting.

AERIAL APPLICATION

Aerial application may only be done by a registered aerial application operator using a registered and correctly calibrated aircraft according to the instructions of SABS Code 0118 (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. It is therefore essential that the following criteria be met;

Equipment

- Use suitable atomising equipment (hydraulic nozzles or rotary atomisers) that will produce the desired droplet size and coverage of the target area and will ensure the minimum loss of product through drift.
- The operator must use a nozzle set-up that will produce a droplet spectrum with the lowest possible relative span.
- All nozzles and atomisers should be positioned within the inner 75% of the wingspan to prevent droplets from entering the wingtip vortices.

Application Parameters

- A minimum volume of 30 l spray mixture per ha is recommended. As this product has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy nor be held responsible for any adverse effects if this product is applied aerially at a lower volume rate than recommended.
- Ensure that the production of fine droplets, with a VMD less than 150 microns, is restricted to a minimum.
- The height of the spray boom should be maintained at between 3 and 4m above the target.
- Do not spray when the aircraft is in a climb, at the top of a turn or during a dive or when banking.
- Apply before the crop growth becomes too dense, which will interfere with overall plant coverage.

Meteorological Conditions

- The difference between the wet and dry bulb readings as determined by a whirling hygrometer, must not exceed 8 °C.
- Do not spray under turbulent, unstable conditions nor during the heat of the day when rising thermals and downdraughts occur.
- Do not spray under temperature inversion conditions (spraying in or above the inversion layer).
- Do not spray when the wind speed exceeds 15 km per hour.

General

- Ensure that 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.

Pre-emergence application:

- A minimum spray volume of 30 l/ha.

- A minimum of 20 to 30 droplets per cm² must be recovered on the target area.
- Employ a droplet spectrum with VMD of 450 micron.

Post-emergence application:

- A minimum spray volume of 40 l/ha.
- A minimum of 30 to 45 droplets per cm² must be recovered on the target area.
- Employ a droplet spectrum with VMD of 350 micron.

RECOMMENDATIONS

PRE-EMERGENCE

CROP	% CLAY	RIVAL SC (l/ha)
Maize Pre-emergence application	0 – 10	2,3 – 2,7
	11 – 20	2,7 – 3,3
	21 – 40	3,3 – 4,2
	> 40	---

Remarks

- Adhere to the use restrictions as indicated on the label for follow-up crops.
- Apply within 3 days of planting but before crop and weed emergence.
- *Datura spp.* may sometimes be poorly controlled, particularly on heavy soils and *Tagetes minuta* may not be controlled season long.
- The higher rates should be used on heavier soils and/or for improved control of *Digitaria sanguinalis*, *Tagetes minuta* and *Urochloa panicoides*.

PRE-EMERGENCE TANK MIXTURE FOR BROAD SPECTRUM WEED CONTROL

CROP	% CLAY	RIVAL SC (l/ha)	PREFIX S EC (l/ha)
Maize Pre-emergence application of tank mixtures	0 – 10	2,3	0,4 – 0,8
	11 – 20	2,7	0,6 – 1,0
	21 – 30	3,3	0,9 – 1,4
	31 – 40	4,2	1,25 – 1,5
	> 40	---	---

Remarks

- Adhere to the use restrictions as indicated on the label for follow-up crops.
- Apply within 3 days of planting but before crop and weed emergence.
- *Datura spp.* may sometimes be poorly controlled, particularly on heavy soils and *Tagetes minuta* may not be controlled season long. The higher rates are recommended for the control of *Urochloa panicoides*, *Cyperus esculentus*, *Digitaria sanguinalis* and *Panicum schinzii* control will be improved.

PRE-EMERGENCE TANK MIXTURE (Northwest Province and Northern Free State)

CROP	% CLAY	RIVAL SC (l/ha)	PREFIX S EC (l/ha)
Maize Pre-emergence application of tank mixtures	0 – 10	2,3	0,17
	11 – 20	2,7	0,17
	21 – 30	3,3	0,25
	> 31	---	---

Remarks

- Adhere to the use restrictions as indicated on the label for follow-up crops.
- Apply within 3 days of planting but before crop and weed emergence.
- *Datura spp.* may sometimes be poorly controlled, particularly on heavy soils and *Tagetes minuta* as well as *Tagetes minuta* may not be controlled season long. *Urochloa panicoides* and *Panicum schinzii* control will be enhanced.

POST-EMERGENCE

Rival SC can be applied as a post-emergence treatment to extend the length of weed control by:

- Applying **Rival SC** early post-emergence alone or in tank mixture with alachlor EC.
- Applying **Rival SC** early post-emergence on maize treated with a pre-plant incorporated treatment of either **Prefix S EC** or alachlor EC.
- Applying **Rival SC** early post-emergence on maize preceded by a post-plant pre-emergence treatment for grass control with **Prefix S EC** or alachlor EC.

A post-emergence treatment of **Rival SC** must be applied after crop emergence but before broadleaf weeds develop to the 4-leaf stage. It is recommended to apply a pre-emergence treatment for grass control such as **Prefix S EC** or alachlor EC prior to using **Rival SC** as a post-emergence treatment. If weeds have developed beyond the required growth stage, these should be controlled by cultivation and the **Rival SC** treatment applied to clean soil.

EARLY POST-EMERGENCE FOR THE CONTROL OF BROADLEAF WEEDS

% CLAY	RIVAL SC (ℓ/ha)
0 – 10	2,5
11 – 20	2,9
21 – 30	3,3
31 – 50	3,3 – 5,0

Remarks

- Adhere to the use restrictions as indicated on the label for follow-up crops.
- This treatment will not control yellow nutsedge (*Cyperus esculentus*).
- For early post-emergence applications, broadleaf weeds should not have developed beyond the 4leaf stage and grasses should not have emerged. Should weeds have developed beyond these growth stages, they must first be destroyed by cultivation prior to application.
- This treatment is ideal to follow a pre-emergence treatment with a grass killer such as **Prefix S EC**. Consult the **Prefix S EC** for application details.

EARLY POST-EMERGENCE FOR GRASS AND BROADLEAF WEED CONTROL

% CLAY	RIVAL SC (ℓ/ha)		ACETAK EC (ℓ/ha)		ALACHLOR EC (ℓ/ha)
0 – 10	2,5	P	0,75	O	2,0
11 – 20	2,9	L	0,75 – 1,0	R	2,0
21 – 30	3,3	U	1,0		2,0
31 – 50	3,3 – 5,0	S	1,0		2,0

Remarks

- Adhere to the use restrictions as indicated on the label for follow-up crops.
- This treatment will not provide adequate control of yellow nutsedge (*Cyperus esculentus*).
- For early post-emergence applications, broadleaf weeds should not have developed beyond the 4leaf stage and grasses should not have emerged. Should weeds have developed beyond these growth stages, they must first be destroyed by cultivation prior to application.
- This treatment is ideal to follow a pre-emergent row treatment and an interrow cultivation.

PREFIX S EC OR ALACHLOR EC FOLLOWED BY RIVAL SC (SPLIT TREATMENT)

CROP	% CLAY	Prefix S EC (ℓ/ha) Post-plant Preemergence	Alachlor EC (ℓ/ha) Post-plant Preemergence	Rival SC (ℓ/ha) Early postemergence
Maize	0 – 10	0,5 – 0,75	4,0	2,5
	11 – 20	0,75 – 1,0	4,5	2,9
	21 – 30	1,0 – 1,5	5,0	3,3
	31 – 50	1,25 – 1,75	5,0	3,3 – 5,0

Remarks

- Adhere to the use restrictions as indicated on the label.
- This treatment will not always provide adequate control of yellow nutsedge (*Cyperus esculentus*).
- For early post-emergence applications, broadleaf weeds should not have developed beyond the 4leaf stage and grasses should not have emerged. Should weeds have developed beyond these growth stages, they must first be destroyed by cultivation prior to application.

WEEDS CONTROLLED BY RIVAL SC:

Grass species (pre-emergence only)

<i>Chloris virgata</i>	Feathertop Chloris
<i>Eleusine indica</i>	Goose grass
<i>Panicum schinzii</i>	Sweet buffalo grass
<i>Setaria pallide-fusca</i>	Red bristle grass

Broadleaf weeds (Pre-emergence only)

<i>Acanthospermum australe</i>	8-seeded prostrate starbur
<i>Acanthospermum glabratum</i>	5-seeded prostrate starbur
<i>Acanthospermum hispidum</i>	Upright starbur

<i>Amaranthus deflexus</i>	Perennial pigweed
<i>Amaranthus hybridus</i>	Common pigweed
<i>Amaranthus spinosus</i>	Thorny pigweed
<i>Amaranthus thunbergii</i>	Red pigweed
<i>Bidens bipinnata</i>	Spanish blackjack
<i>Bidens pilosa</i>	Blackjack
<i>Chenopodium album</i>	White goosefoot
<i>Chenopodium carinatum</i>	Nettle-leaved goosefoot
<i>Cleome monophylla</i>	Spindlepod
<i>Cleome rubella</i>	Pretty lady
<i>Commelina benghalensis</i>	Bengal wandering jew
<i>Crotalaria sphaerocarpa</i>	Mealie Crotalaria
<i>Galinsoga parviflora</i>	Gallant soldier
<i>Gisekia pharnaceoides</i>	Gisekia
<i>Hibiscus trionum</i>	Bladderweed
<i>Nicandra physaloides</i>	Apple of Peru
<i>Physalis angulata</i>	Wild gooseberry
<i>Portulaca oleracea</i>	Purslane
<i>Richardia brasiliensis</i>	Tropical Richardia
<i>Schkuhria pinnata</i>	Dwarf marigold
<i>Sonchus oleraceus</i>	Sowthistle
<i>Tagetes minuta</i>	Khaki weed

Variable control (pre-emergence)

<i>Cosmos bipinnatus</i>	Cosmos
<i>Commelina benghalensis</i>	Bengal wandering Jew
<i>Datura ferox</i>	Large thorn apple
<i>Datura stramonium</i>	Thorn apple
<i>Hibiscus cannabinus</i>	Kenaf

Post-emergence

<i>Cucumis myriocarpus</i>	Striped wild cucumber
<i>Ipomeoa purpurea</i>	Common morning glory
<i>Tribulus terrestris</i>	Dubbeltjie
<i>Xanthium strumarium</i>	Cocklebur

Additional grass and nutsedge control (where an additional grass herbicide is added as recommended)

<i>Brachiaria eruciformis</i>	Sweet signal grass
<i>Cyperus esculentus</i> (variable control)	Yellow nutsedge
<i>Digitaria sanguinalis</i>	Crab finger-grass
<i>Panicum maximum</i>	Common buffalo grass
<i>Setaria verticillata</i>	Sticky bristle grass
<i>Tragus berteronianus</i>	Small carrotseed grass
<i>Tragus racemosus</i>	Large carrotseed grass
<i>Urochloa brachyura</i>	Garden grass
<i>Urochloa mozambicensis</i>	Common Urochloa
<i>Urochloa panicoides</i>	Herringbone grass

The registration holder does not accept any liability in respect of the control of unlisted weeds.

WAARSKUWINGS

- Giftig indien ingesluk.
- Gevaarlik vir visse.
- Bêre agter slot-en-grendel in 'n koel plek.
- Bêre weg van voedsel, voer, kunsmis en ander landbouprodukte.
- Hou buite bereik van kinders, oningeligte persone en diere.
- In geval van vergiftiging ontbied 'n geneesheer en toon hierdie etiket aan hom/haar.
- **Lugtoediening:** Stel al die inwoners in die onmiddellike omgewing van die gebied wat bespuit gaan word in kennis en reik die nodige waarskuwings uit. Moet nie oor wateroppervlaktes spuit nie en tref voorsorg dat die spuitnewel nie water of aangrensende gebiede sal besoedel nie.

Alhoewel hierdie middel omvattend onder 'n groot verskeidenheid toestande getoets is, waarborg die registrasiehouer nie dat dit onder alle toestande doeltreffend sal wees nie. Die werking en doeltreffendheid daarvan kan beïnvloed word deur faktore soos abnormale grond-, klimaats- en bergingstoestande, kwaliteit van die verdunningswater, verenigbaarheid met ander stowwe wat nie op die etiket aangedui word nie en die voorkoms van weerstand van die onkruid teen die betrokke middel sowel as die tyd en akkuraatheid van toediening. Verder aanvaar die registrasiehouer nie verantwoordlikheid vir skade aan gewasse, plantegroei en die omgewing of nadelige invloede op mens of dier of vir 'n gebrek aan prestasie van die betrokke middel as gevolg van 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

- Moet nie dampe of spuitnewel inasem nie.
- Vermyn kontak met die vel en oë deur beskermende oorklere te dra wanneer die produk gemeng word.
- Indien produk in aanraking met die oë kom, spoel met water en kry mediese hulp indien nodig.
- Was na gebruik of toevallige velkontak met seep en water. Was besoedelde klere na gebruik.
- Moet nie eet, drink of rook tydens vermenging of toediening van die produk of voordat hande en gesig gewas is nie.
- Moet nie nader as 15 m vanaf boorgate, strome, riviere en damme meng en hervul nie.
- Moet nie nader as 15 m van boorgate, strome en riviere toedien nie.
- Moet nie nader as 60 m van damme toedien nie.
- Verseker dat geen terugsyfering na boorgate of damme plaasvind wanneer die produk deur 'n besproeiingsstelsel toegedien word nie.
- Vermyn wegdrywing van spuitnewel na ander gewasse, weiveld, riviere, damme en plekke wat nie onder behandeling is nie.
- Maak toedieningsapparaat skoon na gebruik. Uitspoelwater moet nie gewasse, weiveld, riviere, damme en boorgate besoedel nie.
- Voorkom die besoedeling van voedsel, voer, drinkwater en eetgerei.
- Keer die leë houër oor spuit – of mengtenk om en laat dit vir 30 sekondes dreineer na die vloei tot 'n drup verminder het. Spoel die leë houër **drie keer** uit met 'n volume water gelykstaande aan 'n minimum van 10% van die houër. Gooi die spoelwater by die inhoud van die spuittenk voordat dit gate in die houër gemaak word en dan platgemaak word.
- Vernietig die leë houër, moet vir geen ander doel gebruik nie.

SIMPTOME VAN MENSLIKE VERGIFTING

Irritasie van vel en slymvlies is tipiese reaksies. Mag irritasie van die oë veroorsaak. Dit mag ook irritasie van die vel en 'n allergiese reaksie veroorsaak. Mag jeukerigheid van vel veroorsaak. As groot hoeveelhede mondlik ingeneem word, kan naarheid, braking, abdominale teerheid en diaree voorkom.

NOODHULPBEHANDELING

Velkontak: Verwyder besoedelde klere, sowel as skoene en leeritems. Was die hele lyf met 'n sagte seep en baie water. Moenie 'n skuurmiddel gebruik nie. Persone wat noodhulp toedien, moet handskoene dra om selfkontaminasie te voorkom. Verkry mediese advies indien benodig.

Oogkontak: Was oë onmiddellik uit met groot hoeveelhede skoon water vir ongeveer 15 minute. Lig die onderste en boonste ooglede gedurig op. Indien oogirritasie aanhou, verkry mediese hulp.

Inaseming: Verwyder die persoon van die bron van vergiftiging na 'n goed geventileerde area en maak klere om die nek los. Pas kunsmatige asemhaling toe en dien suurstof indien nodig toe. Hou pasiënt warm en rustig. **Ontbied onmiddellik mediese hulp.**

Mondinname: **Moenie braking induseer nie.** Ontbied onmiddellik mediese hulp. Toediening van maagspoeling of suurstof moet slegs deur opgeleide mediese personeel toegedien word.

NOTA AAN GENEESHEER

Geen spesifieke teengif. Behandel simptome en ondersteunend. Hou pasiënt onder observasie. Dien maagspoeling en suiwing toe indien die pasiënt nie bewusteloos is nie. As minder as 10 mg per kg liggaamsgewig ingeneem is, dien 30 – 60 g geaktiveerde houtskool in 150 – 300 ml water toe.

GEBRUIKSBEPERKINGS

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

- | | | |
|----|---|-----------|
| a) | Mielies en suikerriet | Geen |
| b) | Graansorghum | 6 maande |
| c) | Sonneblomme, grondbone, sojabone, aartappels, droëbone, voersorghum en kleingrane | 18 maande |
| d) | Alle ander gewasse ('n toetsplanting word in alle gevalle aanbeveel) | 24 maande |

LW: Bogenoemde wagperiodes geld slegs indien die aanbevole hoeveelheid **Rival SC** toegedien is en opgevolg is deur normale of bogemiddelde reënval gedurende die seisoen waarin **Rival SC** toegedien is. Waar **Rival SC** op gronde toegedien word wat uitsit by natwording en kraak of krummel by uitdroging soos bv. turfgronde, mag die triasien bestanddeel veel langer in die grond aktief bly as wat deur bostaande wagperiodes aangedui word. Gevolglik moet **Rival SC** nie op sulke gronde gebruik word indien gevoelige gewasse in die voorsienbare toekoms daarop geplant gaan word nie. Op sulke gronde kan vooropkomsbehandelings swak onkruidbeheer tot gevolg hê.

- Moet nie **Rival SC** op ingeteelde ouerplante, eksperimentele of nuut vrygestelde mieliekultivars gebruik alvorens die vervaardigers of saadverspreiders geraadpleeg is nie.
- Moet nie **Prefix S EC** en alachlor EC as 'n tenkmengsel op swakgedreineerde gronde saamvoeg nie.
- Moet nie **Rival SC** op swak gedreineerde grond toedien nie. Die onkruidodder mag tydens versuip-toestande skade aan gewasse veroorsaak.
- Moet nie **Rival SC** op enige gewas of situasie toedien wat nie op hierdie etiket verskyn nie.
- Dien **Rival SC** slegs met akkurate en veilige toedieningsmetodes toe.
- Vloedbesproeiing mag tot verminderde onkruidbeheer lei.
- Optimale onkruidbeheer word verkry op 'n fyn, gelyk saadbed wat vry van kluite, onkruid en plantreste is. **Rival SC** sal ook onkruidbeheer waar minimum- of deklaagbewerking toegepas word.
- As **Rival SC** met ander middels in tenkmengsels gebruik word, moet die gebruiksaanwysings van daardie betrokke produkte gevolg word.
- Toedieninghoeveelhede en spuitvolumes moet vir op die ry behandelings reggestel word.
- Lae temperature en/of swaar aanhoudende reën direk na plant en toediening, mag swak ontkiëming en gewasskade veroorsaak. Saad wat te diep geplant is, kan verdere skade aan gewas veroorsaak. Daar is sekere bekende kultivars wat vir onkruidodders gevoelig is. Indien onseker, raadpleeg u saadfirma.
- Verseker dat voldoende kunsmis tydens plant naby die saad geplaas word om kragtige saailinggroei te bevorder. Dit is veral van belang waar vroeg geplant word terwyl die grondtemperatuur relatief laag is, met aanhoudende vogtige toestande.

WEERSTANDSWAARSKUWING

Vir weerstandsbestuur is **Rival SC** 'n groeppkode **K3 en C1** onkruidodder. Enige populasie van 'n spesifieke onkruid mag individue insluit wat 'n natuurlike weerstand teen **Rival SC**, of enige ander groeppkode K3 en/of C1 onkruidodder het. Indien hierdie onkruidodders herhaaldelik aangewend word, kan die weerstandbiedende individue uiteindelik die onkruidpopulasie oorheers. Hierdie weerstandbiedende onkruid sal waarskynlik nie deur **Rival SC** of enige ander groeppkode K3 en/of C1 onkruidodder beheer word nie.

Om weerstand teen onkruidodders te vertraag:

- Vermyn die eksklusiewe herhaaldelike gebruik van onkruidodders met dieselfde groeppkode. Wissel af met, of gebruik tenkmengsels van, produkte in verskillende onkruidoddergroeppcodes.
- Integreer ander beheermaatreëls (chemies, verbouing, biologies) in onkruidbeheerprogramme.

Vir spesifieke inligting oor weerstandsbestuur kontak die registrasiehouer van hierdie produk.

GEBRUIKSAANWYSINGS

Gebruik slegs soos aangedui.

MENGINSTRUKSIES

Maak die spuittenk halfvol met geskikte water en voeg die benodigde hoeveelheid **Rival SC** by terwyl water aanhoudend geroer word. Maak die spuittenk tot die finale volume vol. Roer goed om vermenging te verseker voordat die mengsel toegedien word. Indien tenkmengsels met ander middels gemaak word, moet die spesifieke vervaardiger se etiket gevolg word. Wanneer mengsels met **Prefix S EC** of alachlor EC gemaak word, moet dié produkte teen die einde bygevoeg word net voor die finale volume water ingetap word. **Die tenkmengsel moet onmiddellik uitgespuit word en nie toegelaat word om oornag in die spuittenk te staan nie.** Die spuittoerusting moet aan die einde van toediening deeglik uitgewas word.

VERENIGBAARHEID

Die verenigbaarheid van **Rival SC** met ander produkte hang van die formulering van die betrokke produkte af, asook van die kwaliteit van die spuitwater. Deurdadig formulering van tyd tot tyd verander, word dit aanbeveel om 'n fisiese verenigbaarheidstoets uit te voer word voordat die tenkmengsel gemaak word. **Rival SC** is verenigbaar met **Prefix S EC** en alachlor EC.

TOEDIENINGSMETODES

Maak seker dat die spuittoerusting korrek gekalibreer is en voortdurend tydens toediening nagegaan word om seker te maak dat die toediening egalig en akkuraat is. Rugsakspuite of 'n konvensionele spuitbalk kan gebruik word. 'n Totale spuitvolume van 200 – 300 l/ha moet gebruik word en kan toegedien word met platwaaierspuitpunte, verkieslik die lae-dryf tipe om fyn druppels te voorkom. **Die mengsel moet aanhoudend en deeglik tydens toediening geroer word.** Gebruik net skoon water vir toediening. Wanneer **Rival SC** na opkoms van onkruid toegedien word, moet 'n geskikte byvoegmiddel gebruik word.

Vir optimale onkruidbeheer, moet die saadbed binne 3 dae voor plant voorberei word en onmiddellik daarna met die **Rival SC** behandeling toegedien word wat met 10 – 15 mm reën of besproeiing opgevolg word. Reënval of besproeiing kort na toediening is noodsaaklik om die onkruid in die bogrondlae in te loog waar die ontkiemende onkruid voorkom. Onder droë toestande mag onkruidsaailinge opkom. Dié onkruid kan vernietig word deur 'n vlakbewerking wat terselfdertyd die onkruid met die boonste 10 – 20 mm grondlaag vermeng. As 'n vooropkomsbehandeling moet **Rival SC** direk na of tydens plant toegedien word maar nie later as drie dae na plant nie.

LUGTOEDIENING

Lugtoediening mag slegs deur 'n geregistreerde lugbespuitingsoperateur met 'n geregistreerde en korrek gekalibreerde vliegtuig volgens die instruksies van SANS Kode 10118 (Aerial Application of Agricultural Pesticides) gedoen word. Dit is belangrik om te verseker dat die spuitmengsel eweredig oor die teikenarea versprei word en dat die verlies aan spuitmengsel tydens toediening tot 'n minimum beperk word. Die volgende kriteria moet nagekom word;

Toerusting

- Gebruik geskikte atomiseringsapparaat (hidroliese of roterende spuitkoppe) wat die vereiste druppelgrootte en bedekking van die teiken sal produseer, maar wat die minste verlies van produk deur wegdrywing sal verseker.
- Die operateur moet 'n spuitstelsel gebruik wat 'n druppelspektrum met die kleinste moontlike relatiewe span sal produseer.
- Al die spuitkoppe en atomiseerders moet in die binneste 75% van die vlerkspan geplaas word om die beweging van druppels binne-in die vlerkpuntvorteks te beperk.

Toedieningsvereistes

- 'n Minimum volume van 30 l spuitmengsel per ha word aanbeveel. Aangesien hierdie produk nie teen 'n verlaagde spuitvolume getoets is nie, kan die registrasiehouer nie effektiwiteit waarborg of verantwoordelik gehou word vir enige nadelige effek indien hierdie produk teen 'n laer volume as hierbo aanbeveel, uit die lug toegedien word nie.
- Verseker dat die produksie van fyn druppels, dié wat kleiner as 150 mikron is, tot 'n minimum beperk word.
- Die hoogte van die spuitbalk moet tussen 3 en 4m bokant die teiken gehandhaaf word.
- Moet nie spuit wanneer die vliegtuig aan die bopunt van 'n draai is of tydens 'n duik of terwyl dit uitklim of draai nie.
- Dien toe voordat die gewas te ruig word aangesien dit die druppelbedekking op die plante sal verminder.

Meteorologiese Toestande

- Die verskil tussen die nat- en droëbollesing, soos met 'n swaaihygrometer bepaal, moet nie 8 °C oorskry nie.
- Moenie tydens turbulente en onstabiele weerstoestande toedien of gedurende die hitte van die dag wanneer stygende en dalende konveksie windbeweging plaasvind nie.
- Moenie onder temperatuurinversie-toestande (deur bokant of binne-in die inversielaag te spuit) toedien nie.
- Moenie spuit indien die windspoed 15 km per uur oorskry nie.

Algemeen

- Sorg dat die lande akkuraat gemerk is en die spuitoperateur presies weet watter lande gespuit moet word.
- Verkry 'n versekering van die spuitoperateur dat aan die bogenoemde vereistes voldoen sal word.

Voor-opkomstoediening:

- Dien 'n minimum van 30 ℓ/ha toe.
- 'n Minimum van 30 – 40 druppels moet op die teikenoppervlak herwin word.
- Gebruik 'n druppelspektrum met 'n VMD van 450 mikron.

Na-opkomstoediening:

- Dien 'n minimum van 40 ℓ/ha toe.
- 'n Minimum van 30 – 45 druppels moet op die teikenoppervlak herwin word.
- Gebruik 'n druppelspektrum met 'n VMD van 350 mikron.

AANBEVELINGS

VOOR-OPKOMS

GEWAS	% KLEI	RIVAL SC (ℓ/ha)
Mielies	0 – 10	2,3 – 2,7
Vooropkoms	11 – 20	2,7 – 3,3
toediening	21 – 40	3,3 – 4,2
	> 40	---

Opmerkings

- Hou by die gebruiksbepenkings vir opvolggewasse.
- Dien binne 3 dae van uitplant toe, maar voor opkoms van gewas en onkruid.
- *Datura spp.* mag soms swak beheer word veral op swaarder gronde en *Tagetes minuta* mag dalk nie vir die hele seisoen beheer word nie.
- Die hoër dosis moet op swaarder gronde gebruik word vir verbeterde beheer van *Digitaria sanguinalis*, *Urochloa panicoides* en *Tagetes minuta*.

VOOR-OPKOMS TENKMENGSELS VIR BREËSPEKTRUM-ONKRUIDBEHEER

GEWAS	% KLEI	RIVAL SC (ℓ/ha)	PREFIX S EC (ℓ/ha)
Mielies	0 – 10	2,3	0,4 – 0,8
Vooropkoms	11 – 20	2,7	0,6 – 1,0
toediening van	21 – 30	3,3	0,9 – 1,4
tenkmengsels	31 – 40	4,2	1,25 – 1,5
	> 40	---	---

Opmerkings

- Hou by die gebruiksbepenkings vir opvolggewasse.
- Dien binne 3 dae van uitplant toe, maar voor opkoms van gewas en onkruid.
- *Tagetes minuta* mag dalk nie vir die hele seisoen beheer word nie. Die hoër dosis word aanbeveel vir die beheer van *Urochloa panicoides*, *Cyperus esculentus*, *Digitaria sanguinalis* en *Panicum schinzii*. *Datura spp.* mag soms swak beheer word veral op swaarder gronde.

VOOR-OPKOMS TENKMENGSELS (Noordwes Provinsie en Noordelike Vrystaat)

GEWAS	% KLEI	RIVAL SC (ℓ/ha)	PREFIX S EC (ℓ/ha)
Mielies	0 – 10	2,3	0,17
Vooropkoms	11 – 20	2,7	0,17
toediening van	21 – 30	3,3	0,25
tenkmengsels	> 31	---	---

Opmerkings

- Hou by die gebruiksbeperkings vir opvolggewasse.
- Dien toe binne 3 dae van uitplant, maar voor opkoms van gewas en onkruid.
- *Datura spp.* mag soms swak beheer word veral op swaarder gronde. *Tagetes minuta* mag dalk nie vir die hele seisoen beheer word nie. Sal verbeterde beheer van *Urochloa panicoides* en *Panicum schinzii* gee.

NA-OPKOMS

Vir verlengde onkruidbeheer kan **Rival SC** na-opkoms van gewas en onkruid toegedien word soos bv:

- Rival SC** as vroeë na-opkoms toediening alleenlik of in tenkmengsel met alachlor EC.
- Rival SC** as vroeë na-opkoms toediening op mielies na 'n voorplant geïnkorporeerde behandeling met, of **Prefix S EC**, of alachlor EC.
- Rival SC** as vroeë na-opkoms toediening op mielies voorafgegaan met na-plant voor-opkoms behandeling van **Prefix S EC** of alachlor EC vir grasbeheer.

'n Na-opkoms toediening van **Rival SC** moet na-opkoms van die gewas toegedien word, maar voor die 4-blaarstadium van breëblaaronkruid. Dit word aanbeveel om 'n vooropkomsmiddel soos **Prefix S EC** of alachlor EC te gebruik vir aanvanklike grasbeheer, opgevolg deur **Rival SC**. Indien onkruid groter as die aanbevole groeistadium ontwikkel het, moet daar geskoffel word om die onkruid te beheer en dan die **Rival SC** op skoon grond toe te dien.

VROEË NA-OPKOMS VIR DIE BEHEER VAN BREËBLAARONKRUIDE

% KLEI	RIVAL SC (ℓ/ha)
0 – 10	2,5
11 – 20	2,9
21 – 30	3,3
31 – 50	3,3 – 5,0

Opmerkings

- Hou by die gebruiksbeperkings vir opvolggewasse.
- Hierdie behandeling sal nie geeluintjie (*Cyperus esculentus*) beheer nie.
- Vir vroeë na-opkomtoedienings, moet breëblaaronkruid nie groter as die 4-blaarstadium wees nie, en voor opkoms van grasse. As onkruid verder as hierdie groeistadium is, moet hulle eerstens doodgeskoffel word.
- Hierdie behandeling is ideaal om na 'n vooropkomsbehandeling van 'n grasdoder soos **Prefix S EC**, te gebruik. Raadpleeg die **Prefix S EC** etiket vir vooropkomsbehandeling.

VROEË NA-OPKOMS VIR VERLENGDE GRAS- EN BREËBLAARBEHEER

% KLEI	RIVAL SC (ℓ/ha)		ACETAK EC (ℓ/ha)		ALACHLOR EC (ℓ/ha)
0 – 10	2,5	P	0,75		2,0
11 – 20	2,9	L	0,75 – 1,0	O	2,0
21 – 30	3,3	U	1,0	F	2,0
31 – 50	3,3 – 5,0	S	1,0		2,0

Opmerkings

- Hou by die gebruiksbeperkings vir opvolggewasse.
- Hierdie behandeling sal nie goeie beheer van geeluintjie (*Cyperus esculentus*) gee nie.
- Vir vroeë na-opkomtoedienings, moet breëblaaronkruid nie groter as die 4-blaarstadium wees nie, en voor opkoms van grasse. As onkruid verder as hierdie groeistadium is, moet hulle eerstens doodgeskoffel word.
- Hierdie behandeling is ideaal om te volg op 'n vooropkomsrybehandeling en 'n tussenrybewerking.

PREFIX S EC OF ALACHLOR EC OPGEVOLG DEUR RIVAL SC (SPLITBEHANDELING)

GEWAS	% KLEI	Prefix S EC (ℓ/ha) Na-plant Vooropkoms	Alachlor EC (ℓ/ha) Na-plant Vooropkoms	Rival SC (ℓ/ha) Vroeë na-opkoms
Mielies	0 – 10	0,5 – 0,75	4,0	2,5
	11 – 20	0,75 – 1,0	4,5	2,9
	21 – 30	1,0 – 1,5	5,0	3,3
	31 – 50	1,25 – 1,75	5,0	3,3 – 5,0

Opmerkings

- Hou by die gebruiksbepelings vir opvolggewasse.
- Hierdie behandeling sal nie altyd goeie beheer van geeluintjie (*Cyperus esculentus*) gee nie.
- Vir vroeë na-opkomtoedienings, moet breëblaaronkruid nie groter as die 4-blaar stadium wees nie, en voor opkoms van grasse. As onkruid verder as hierdie groeistadium is, moet hulle eerstens doodgekoffel word.

ONKRUIDE WAT DEUR Rival SC BEHEER SAL WORD:

Grassoorte (vooropkoms)

<i>Chloris virgata</i>	Witpluim-Chloris
<i>Eleusine indica</i>	Jongosgras
<i>Panicum schinzii</i>	Soetbuffelsgras
<i>Setaria pallide-fusca</i>	Rooiborselgras

Breëblaaronkruid (vooropkoms)

<i>Acanthospermum australe</i>	Agtsadige kruipsterklits
<i>Acanthospermum glabratum</i>	Vyfsadige kruipsterklits
<i>Acanthospermum hispidum</i>	Regopsterklits
<i>Amaranthus deflexus</i>	Meerjarige misbredie
<i>Amaranthus hybridus</i>	Gewone misbredie
<i>Amaranthus spinosus</i>	Doring misbredie
<i>Amaranthus thunbergii</i>	Rooimisbredie
<i>Bidens bipinnata</i>	Spaanse knapsekêrel
<i>Bidens pilosa</i>	Knapsekêrel
<i>Chenopodium album</i>	Withondebossie
<i>Chenopodium carinatum</i>	Groenhondebossie
<i>Cleome monophylla</i>	Rusperbossie
<i>Cleome rubella</i>	Mooinooientjie
<i>Crotalaria sphaerocarpa</i>	Mielie Crotalaria (Wilde lusern)
<i>Galinsoga parviflora</i>	Knopkruid
<i>Gisekia pharnaceoides</i>	Gisekia
<i>Hibiscus trionum</i>	Terblansbossie
<i>Nicandra physaloides</i>	Basterappelliefie
<i>Physalis angulata</i>	Wildeappelliefie
<i>Portulaca oleracea</i>	Porslein
<i>Richardia brasiliensis</i>	Tropiese Richardia
<i>Schkuhrhria pinnata</i>	Kleinkakiebos
<i>Sonchus oleraceus</i>	Sydissel
<i>Tagetes minuta</i>	Kakiebos

Wisselvallige beheer (vooropkoms)

<i>Cosmos bipinnatus</i>	Kosmos
<i>Commelina benghalensis</i>	Benghaalse wandelende Jood
<i>Datura ferox</i>	Grootstinkblaar
<i>Datura stramonium</i>	Stinkblaar
<i>Hibiscus cannabinus</i>	Wildestokroos

Na-opkoms

<i>Cucumis myriocarpus</i>	Wildekomkommer
<i>Ipomeoa purpurea</i>	Purperwinde
<i>Tribulus terrestris</i>	Dubbeltjie

Xanthium strumarium

Kankerroos

Addisionele grasse en uintjies wat beheer word as 'n grasdoder vooropkoms bygevoeg word.

Brachiaria eruciformis

Litjiessinjalgras

Digitaria sanguinalis

Kruisvingergras

Cyperus esculentus (wisselvallige beheer)

Geeluintjie

Panicum maximum

Gewone buffelsgras

Setaria verticillata

Klitsborselgras

Tragus berteronianus

Kleinwortelsaadgras

Tragus racemosus

Grootwortelsaadgras

Urochloa brachyura

Urochloa

Urochloa mozambicensis

Bosveldbeesgras

Urochloa panicoides

Beesgras

Die registrasiehouer neem geen verantwoordelikheid vir beheer van onkruid wat nie gelys is nie.