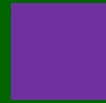




Dow AgroSciences

# MCPA 400 SL



HERBICIDE

Reg No L3616 Act/Wet Nr. / No. 36 of / van 1947

A selective soluble concentrate hormone type herbicide for the post emergent control of annual weeds, as indicated, in grain sorghum, small grains, lawns, grass pastures, maize, sugarcane as well as *Plantago lanceolata* and *Ipomoea coscinasperma* in apples, pears, peaches and vines.

'n Selektiewe oplosbare konsentraat hormoon tipe onkruid doder vir die na-opkombeheer van eenjarige onkruid, soos aangetoon, in graansorghum, grasperke, grasweidings, kleingraan, mielies, suikerriet asook *Plantago lanceolata* en *Ipomoea coscinasperma* in appels, pere, perskes en wingerde.

HRAC HERBICIDE GROUP CODE

O

HRAC ONKRUIDDODER GROEPKODE

## AKTIEWE BESTANDDEEL / ACTIVE INGREDIENT

MCPA (phenoxy acetic acid).....	400 g/l a.e./s.e. ....	MCPA (fenoksie-asynsuur)
MCPA as the potassium salt .....	476 g/l .....	MCPA as die kaliumsout
Net volume .....	ℓ .....	Netto volume

### REGISTRATION HOLDER / REGISTRASIEHOUER

DOW AGROSCIENCES SOUTHERN AFRICA (PTY) LTD / (EDMS) BPK  
REG NO 1967/007147/07  
PRIVATE BAG X160 PRIVAATSAK  
BRYANSTON 2021

Batch number. ....

.....Lotnommer

Date of Manufacture. ....

..... Vervaardigingsdatum

UN NUMBER: N/R

Poisons Helpline: +27(0)861-555-777  
Griffon Poison Information Centre: +27(0)82-446-8946  
24 Hour Emergency Tel No: 082-887-8079  
Information Hotline Tel No: +27 (012) 361-8112

MCPA 400 SL/2012-01-09



HARMFUL  
SKADELIK



## **WARNINGS**

- **Allow seven days between last application and harvesting or grazing of treated areas.**
- Handle with care.
- Poisonous when swallowed, inhaled or absorbed through the skin.
- Toxic to fish and wildlife.
- Store in a cool place away from food, feeds, seed and other agricultural remedies.
- Keep out of reach of children, uninformed persons and animals.
- ***Avoid spray drift onto susceptible crops e.g. all broadleaf crops as well as all grain varieties in a susceptible stage of growth.***
- Do not apply to land **adjacent** to susceptible crops as well as grain varieties in a susceptible growth stage. May be applied by tractor sprayer on land in the **vicinity** of susceptible crops, **provided that adequate precautionary measures are taken to avoid spray drift.**
- Do not apply **MCPA 400 SL** at all in nurseries or near to or onto or over nursery plant material.

**RE-ENTRY INTERVAL:** Do not enter treated area within 1 day after treatment unless wearing protective clothing.

## **AERIAL APPLICATION:**

- Notify all inhabitants in the immediate vicinity of the area to be sprayed and issue the necessary warnings. Do not spray over or allow drift to contaminate water or adjacent areas.
- **NOTE:** **MCPA 400 SL** is a highly active herbicide that, in small quantities, when used incorrectly, can cause serious damage to crop seedlings, deciduous fruit trees and grape vines during budding and early season growth stages. Under the following conditions it can cause serious damage as far as 3 to 5 km from the nearest spray path of the aircraft: Cloudy weather with relative humidity above 80 % and low air movement of less than 5 km per hour. When such conditions prevail, aerial application should **NOT** be carried out where crop seedlings, deciduous fruit trees and grape vines in budding or early development stages are present within 5 km of the nearest spray path of the aircraft.

***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**

- Avoid inhalation of spray mist and fumes.
- Wear protective clothing: rubber gloves, boots and face shield when handling the concentrate; rubber gloves and boots during application.
- Wash contaminated clothing daily.
- Do not eat, drink or smoke whilst applying and mixing, or before washing face and hands and change of clothing.
- Prevent spray drift onto other crops, grazing, rivers, dams and any area not under treatment.
- Clean applicator with a household ammonia solution (1%) before using with other pesticides. Let solution stand for several hours, preferably overnight. Rinse at least twice. This applicator should not be used for applying chemicals other than herbicides.
- Dispose of wash water where it will not contaminate food, grazing, boreholes, rivers or dams.
- Invert the empty container over the spray or mixing tank and allow to drain for at least 30 seconds after the flow has slowed down to a drip. Thereafter rinse the container three 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 tank before destroying the container in the prescribed manner.
- Destroy empty container by perforation and flattening and never use for any other purpose.
- Prevent contamination of food, feeds, drinking water and eating utensils.

## **SYMPTOMS OF HUMAN POISONING**

Moderately irritating to skin and mucous membranes. Ingestion of high concentrations may cause emesis, fibrillary muscle twitching, tachycardia, hyperventilation, vasodilation or even convulsion and coma.

## **FIRST AID TREATMENT**

When body contamination occurs remove contaminated clothing and immediately wash hair and affected skin areas with soap and water.

If eye contamination occurs flush eyes with copious amounts of clean water for 10 - 15 minutes.

## **NOTE TO PHYSICIAN**

If large quantities are ingested rinse mouth thoroughly with water. Do not induce vomiting. Evacuate stomach by intubation, aspiration and lavage. Treat symptomatically.

## USE RESTRICTIONS:

To prevent damage, do not permit drift or spray mist to come into contact with sensitive broadleaf crops, fruit trees or ornamental plants, or soil in which such plants are to be grown within 3 (three) months or grain varieties in a susceptible stage of growth. Apply the product strictly in accordance with application directions and take the wind speed and direction as indicated in the following table into consideration when applications are made.

<b>THE WIND SPEED AND DIRECTION AT THE TIME OF APPLICATION WILL DETERMINE THE DISTANCE WHICH MUST SEPARATE THE CLOSEST EDGE OF THE AREA TO BE SPRAYED FROM SUSCEPTIBLE CROPS.</b>		
<b>WIND SPEED km/h</b>	<b>AERIAL APPLICATION</b>	<b>GROUND APPLICATION</b>
1,5 - 5,0	800 m downwind 800 m crosswind 15 m upwind	200 m downwind 200 m crosswind 6 m upwind
5,0 - 10,0	1 600 m downwind 800 m crosswind 15 m upwind	400 m downwind 200 m crosswind 1,5 m upwind
10,0 - 15,0	3 200 m downwind 800 m crosswind 15 m upwind	800 m downwind 400 m crosswind 1,5 m upwind
Above 15	Prohibited	Prohibited

Do not apply **MCPA 400 SL** at all in nurseries or near to or onto or over nursery plant material.

## **RESISTANCE MANAGEMENT :**

For resistance management, **MCPA 400 SL** is a group code O herbicide. Any weed population may contain individuals naturally resistant to **MCPA 400 SL** and other Group Code O herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds may not be controlled by **MCPA 400 SL** or any other Group Code O herbicides.

To delay herbicide resistance:

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

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

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

**GROUND APPLICATION:** Avoid fine droplet size. Use low pressure flat fan nozzles of 80E or equivalent anti-drift type and do not exceed spray pressure of 200 kPa. Spray volume must be a minimum of 150 litre per hectare. Do not exceed spray height of 50 cm above target and ground speed of 10 km per hour. Cease spraying or do not apply if wind velocity exceeds 15 km per hour (as measured by hand held wind recorder approved by the Registrar Act 36 of 1947). The difference between the wet and dry bulb readings on a whirling hygrometer must not exceed 8 °C

The best results for broadcast application with ground equipment are achieved when applying a minimum of 200 ℓ spray mixture /ha for pre-emergence spraying and a minimum of 150 ℓ / ha for post-emergence spraying.

## **AERIAL APPLICATION**

**Do not apply MCPA 400 SL by air in KwaZulu Natal.**

Aerial application of **MCPA 400 SL** may only be done by a registered aerial application operator using a registered and correctly calibrated aircraft according to the instructions of SANS Code 10118 (The Aerial Application of Agricultural Remedies). 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 atomizing equipment (hydraulic nozzles or rotary atomizers) that will produce the desired droplet size and coverage, but which will ensure the minimum loss of product through drift and/or evaporation. The spraying system must produce a droplet spectrum with the lowest possible Relative Span.
- Position all the atomizers within the inner 60 to 75 % of the wingspan to prevent droplets from entering the wingtip vortices.
- The use of a suitable and registered drift retardant adjuvant and / or low drift nozzles (eg. straight stream nozzles) is recommended. In the case of fixed-wing aircraft flying at a speed faster than 130 mph, the maximum deflection angle of the nozzles or spray stream, as measured from a horizontal straight backwards orientation, may not exceed 30 degrees. In the case of slower flying fixed wing aircraft the maximum deflection angle, as described above, may not exceed 55 degrees.

### **Application requirements:**

- **Volume:** A spray mixture volume of 30 to 50 litres per hectare is recommended. As this product has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy, or be held responsible for any adverse effects if this product is applied aerially at a lower volume rate than recommended above.
- **Droplet coverage:** 30 to 40 droplets per cm<sup>2</sup> must be recovered at the target area.
- **Droplet size:** A droplet spectrum with a VMD of 300 to 350 microns is recommended. Limit the production of fine droplets less than 150 microns (high drift and evaporation potential) to a minimum.
- **Flying height:** Maintain the height of the spray boom at 3 to 4 metres above the target. Do not spray when aircraft dives, is in a climb or when banking.
- **Crop density:** Apply before the crop and/or weeds become too dense thus preventing proper spray coverage of the weeds.

### **Meteorological conditions:**

- The difference in **temperature** between the wet and dry bulb thermometers, of a whirling hygrometer, should not exceed 8°C.
- Stop spraying if the **wind speed** exceeds 15 km/h.
- Stop spraying under **turbulent**, unstable and dry conditions during the heat of the day, when rising thermals and downdraughts may occur.
- Spraying under temperature **inversion conditions** (spraying in or above the inversion layer) and/or high **humidity conditions** (relative humidity 80 % and above) may lead to the following:
  - reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage),
  - damage to other sensitive crops and/or non-target areas through drifting of the suspended spray cloud away from the target field.

### **General :**

- Ensure that the Aerial Spray Operator knows exactly which fields to spray.
- Obtain an assurance from the Aerial Spray Operator that the above requirements will be met and that relevant data will be compiled in a logbook and kept for future reference.

**PRE-EMERGENCE TREATMENT:** Plant the crop in a weed-free, moist soil immediately after preparation of a fine seedbed. For the control of annual grasses, as indicated, application should be made before emergence of the grass seedlings.

**POST-EMERGENCE TREATMENT:** Apply only when the crop is in the correct stage of development, as indicated. Weeds should only be sprayed in the young stages and when growing actively in a moist soil. Rain one day after application will not reduce the effectiveness of the herbicide.

## APPLICATION RATES

<b>CROP</b>	<b>DOSAGE (ℓ/ha)</b>	<b>REMARKS</b>
<b>BARLEY AND RYE</b>	2,0 - 4,0	Apply only when the crop is in the 5 leaf stage (five leaves on the main haulm with the sixth leaf already visible) to 7 leaf stage.
<b>GRAIN SORGHUM</b>	2,50	Apply when the crop has reached a height of 15 to 25 cm (about three weeks after emergence). If application is to be made at a later stage, directional spraying with drop-arms must be used. Do not apply under cold and / or wet conditions as the crop may possibly be affected detrimentally.
<b>GRASS PASTURES</b> (established only)	4,0 - 5,25	An application of nitrogenous fertilizer 2 to 3 weeks before application of the herbicide is recommended. <b>IMPORTANT:</b> Only apply <b>MCPA 400 SL</b> to grass pastures which are well established i.e. which have a well-developed secondary root system and which have already been grazed or cut two times.
<b>LAWNS</b> (established only)	4,0 - 5,25	Apply onto established lawns only i.e. which have a well-developed secondary root system and which have been mowed two times already. Fertilize prior to treatment as for grass pastures. Repeat applications may be necessary.
<b>MAIZE</b>	2,50	Spray only if the crop has reached a height of 45 cm and apply as an inter-row directed spray by means of drop-arms to avoid spray solution being deposited in the funnels of maize plants. Grass weeds, which have already emerged at this stage, will not be controlled. Do not apply under cold and / or wet conditions as the crop may possibly be affected detrimentally.
<b>OATS</b>	1,33	Apply only when the crop is in the 5 leaf stage (five leaves on the main haulm with the sixth leaf already visible) to 6 leaf stage.

<b>CROP</b>	<b>DOSAGE (ℓ/ha)</b>	<b>REMARKS</b>
<b>SUGARCANE</b> (Pre-emergence on plant and ratoon cane)	6,25 - 8,75	Apply as an overall spray in 300 to 400 litres water per ha within a few days after planting or harvesting and before emergence of the weeds. Use the lower dosage on lighter soil types.
<b>SUGARCANE</b> (Post-emergence on plant and ratoon cane)	6,25 - 8,75	This treatment may cause damage to the cane but the risk of this occurring will be minimized if the spray is directed so as to avoid wetting the cane leaves as far as possible. Apply as a directed inter-row spray in 300 to 400 litres water per ha at an early stage of weed growth. If the cane exceeds a height of 40 cm or has unfurled more than 5 leaves per shoot, directed spraying is essential or else the growth may be retarded.
<b>SUGARCANE:</b> NOTE: For controlling a wider spectrum of broadleaf weeds and young grasses as well as sedges ( <i>Cyperus</i> spp), a combination spray of <b>MCPA 400 SL</b> with DIURON or AMETRYN is recommended. For full particulars of directions to use consult the DIURON or AMETRYN labels.		
<b>CROP</b>	<b>DOSAGE (ℓ/ha)</b>	<b>REMARKS</b>
<b>WHEAT</b>	2,0 - 4,0	Apply between growth stages 7 (centre double ridges enlarged) and 13 (awn of top spikelets elongated) according to the growth stages of the ARC Small Grain Institute, Bethlehem. Consult the representative of the supplier.  Dosage choice depends on weed growth stage.



CROP	DOSAGE l/ha	REMARKS
<p><b>APPLES, PEARS, PEACHES AND VINES</b></p> <p>1. For the control of <i>Plantago lanceolata</i> and <i>Ipomoea coscinosperma</i> in the Western Cape.</p>	<p>5,0 l/400 - 500 l water/ha (for spot treatment: 170 ml/15 l water)</p>	<p>Apply as a directed spray only. Take care to avoid spray drift and the spraying of fine droplets which could cause drift.</p> <p><b>Method 1:</b> Apply only 1 spray on the weeds after blossom time of the crop when the fruitlets are still small.</p> <p><b>Method 2:</b> Apply 2 sprays on the weeds, the first at budburst before the crop blossom and the second time when fruitlets are still very small.</p>
<p>2. For the control of annual and certain perennial broadleaf weeds</p>	<p><b>Early winter:</b> 1,5 - 2,0 l <b>PLUS</b> 2,0 - 3,0 l <b>MAMBA 360 SL</b> (L4817)</p> <p><b>OR</b> 1,5 - 2,2 l <b>MAMBA MAX 480 SL</b> (L7714) per hectare</p> <p><b>OR</b> 1,5 - 2,2 l <b>MAMBA DMA 480 SL</b> (L8388) per hectare</p> <p><b>Late winter:</b> 2,0 - 3,0 l <b>PLUS</b> 3,0 - 4,5 l <b>MAMBA 360 SL</b> (L4817)</p> <p><b>OR</b> 2,2 - 3,3 l <b>MAMBA MAX 480 SL</b> (L7714) per hectare</p> <p><b>OR</b> 2,2 - 3,3 l <b>MAMBA DMA 480 SL</b> (L8388) per hectare</p>	<p>Apply before budburst and seven or more days after pruning or removal of green suckers.</p> <p>Apply when weeds such as <i>Plantago lanceolata</i> and <i>Erodium moschatum</i> (Musk Heron's Bill) are young and actively growing.</p> <p>When weeds are mature.</p>

## **WARNINGS REGARDING USAGE OF MCPA 400 SL IN ORCHARDS AND VINEYARDS:**

1. Do not spray directly onto the trees or vines. Direct the spray on the ridge towards the base of the stems, or onto the soil in-between rows, away from the trees or vines. Spray only on a calm day with no wind. Do not spray if the orchards or vineyards are interplanted with any other crop. Only use spray equipment designated solely for use with herbicides. Spray equipment must NOT be used afterwards for insecticide or fungicide sprays.
2. For optimal results in orchards or vineyards, consider the following:
  - 2.1 Do not spray weeds immediately before or after irrigation.
  - 2.2 Do not spray when rain is expected within 6 hours.
  - 2.3 Rain shortly after application could have a negative effect on the results.
3. Do not apply **MCPA 400 SL** at all in nurseries or near to or onto or over nursery plant material.

## **SOME WEED SPP NORMALLY CONTROLLED BY MCPA 400 SL**

### **PRE- AND POST EMERGENCE:**

<i>Ageratum conyzoides</i>	Billygoat weed
<i>Amaranthus thunbergii</i>	Red pigweed
<i>Amaranthus spinosus</i>	Thorny pigweed
<i>Arctotis leiocarpa</i>	Karoo daisy
<i>Arctotis venusta</i>	Free State daisy
<i>Bidens bipinnata</i>	Spanish blackjack
<i>Bidens pilosa</i>	Common blackjack
<i>Chenopodium album</i>	White goosefoot
<i>Commelina benghalensis</i>	Bengal commelina
<i>Cosmos bipinnatus</i>	<i>Cosmos</i>
<i>Galinsoga parviflora</i>	Small flowered quick weed
<i>Portulaca oleracea</i>	Common purslane
<i>Raphanus raphanistrum</i>	Wild radish
<i>Sysimbrium thellungii</i>	Wild mustard
<i>Tagetes minuta</i>	Khakiweed
<i>Vicia hirsuta</i>	Tiny vetch
<i>Vicia sativa</i>	Common vetch

### **PRE-EMERGENCE ONLY:**

<i>Brachiaria eruciformis</i>	Sweet signal grass
<i>Eleusine indica</i>	Goose grass
<i>Panicum schinzii</i>	Vlei panicum (early germinating)
<i>Setaria verticillata</i>	Bur bristle grass
<i>Sorghum verticilliflorum</i>	Common wild sorghum

**ONLY POST EMERGENCE:**

*Datura ferox* (2-3 leaf stage)

*Datura stramonium* (2-3 leaf stage)

*Polygonum aviculare*

*Striga asiatica*

*Tribulus terrestris*

*Xanthium strumarium*

*Xanthium spinosum*

Large thorn apple

Common thorn apple

Prostrate knotweed

Witchweed

Common dubbeltjie

Large cockle bur

Spiny cockle bur

**24 HOUR EMERGENCY : TEL. NO. 082-887-8079**

**INFORMATION HOTLINE : TEL. NO.: (012) 361-8112**

## **WAARSKUWINGS**

- **Laat sewe dae toe na laaste toediening en oes of beweiding van behandelde gebiede.**
- Hanteer versigtig.
- Giftig deur inname, deur inaseming of deur vel geabsorbeer word.
- Giftig vir visse en natuurlewe.
- Berg in 'n koel plek weg van voedsel, voer, saad en ander landboumiddels.
- Hou buite bereik van kinders, oningeligte persone en diere.
- **Verhoed spuitstofwegdrywing na gevoelige gewasse, bv alle breëblaargewasse asook alle graansoorte in 'n gevoelige groeistadium.**
- Moet nie op lande **aangrensend** aan gevoelige gewasse of graansoorte wat in 'n gevoelige groeistadium is, toegedien word nie. Kan deur middel van 'n trekkerspuit op lande in **nabyheid** van gevoelige gewasse toegedien word, **mits voldoende voorsorg teen spuitstofwegdrywing getref word.**
- Moenie **MCPA 400 SL** enigsins in kwekerye, óf naby óf op óf oor kwekery plantmateriaal aanwend nie.

**HERBETREDING:** Moet nie behandelde gebied vir 1 dag na die bespuiting betree nie, tensy beksermende oorklere gedra word.

## **LUGTOEDIENING:**

- Stel die inwoners in die onmiddellike omgewing van die lande wat bespuit word in kennis en reik die nodige waarskuwings uit. Moet nie oor aangrensende gebiede of water spuit of die spuitnewel toelaat om dit te besoedel nie.
- **LET WEL**  
**MCPA 400 SL** is 'n uiters aktiewe onkruidoder wat, in klein hoeveelhede, indien verkeerdelik aangewend, ernstige skade kan aanrig aan gewassaailinge, sagtevrugtebome en wingerde tydens bot en vroeë seisoensgroei. Onder die volgende klimaatstoestande kan dit ernstige skade aanrig vir so ver as 3 tot 5 km vanaf die naaste spuitbaan van die vliegtuig: bewolkte weer met relatiewe humiditeit hoër as 80 % en stadige lugbeweging van minder as 5 km per uur. Waar sulke toestande heers moet lugtoediening **NIE** uitgevoer word indien gewassaailinge, sagtevrugtebome en wingerde in bot of vroeë ontwikkelingsstadia, binne 5 km vanaf die naaste spuitbaan van die vliegtuig voorkom 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 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 en dier of vir 'n gebrek aan prestasie van die betrokke middel as gevolg van die versuim deur die gebruiker om etiketaanwysings na te kom as gevolg van die ontstaan van toestande wat nie***

***kragtens die registrasie voorsien kon word nie. Raadpleeg die verskaffer in geval van enige onsekerheid.***

## **VOORSORGMATREËLS**

- Voorkom inaseming van spuitnewel en dampe.
- Dra beskermende klere: rubberhandskoene en stewels en 'n gesigskerm wanneer die konsentraat hanteer word; rubberhandskoene en stewels gedurende toediening.
- Was besoedelde klere daaglik.
- Moet nie eet, drink of rook tydens toediening of vermenging nie, of voordat gesig en hande gewas en klere verwissel is nie.
- Voorkom oorwaai van spuitnewel na ander gewasse, weiding, riviere, boorgate, damme en enige ander gebied wat nie behandel word nie.
- Maak spuittoerusting met 'n huishoudelike ammoniakoplossing (1 %) skoon voordat ander plaagdoders daarmee toegedien word. Laat staan die oplossing vir 'n paar uur, verkieslik oornag. Spoel ten minste twee keer uit.
- Hierdie spuittoerusting behoort nie vir die toediening van enige ander chemikalieë behalwe onkruidodders gebruik te word nie.
- Gooi waswater weg waar dit nie voedsel, weiding, riviere of damme sal besoedel nie.
- Keer die leë houër oor die spuittenk of mengbak om en dreineer vir minstens 30 sekondes nadat die vloeitot 'n gedrup verminder het. Spoel die houër daarna 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 die houër op die voorgeskrewe wyse vernietig word.
- Vernietig leë houër deur gate daarin te maak en plat te druk. Moet vir geen ander doel gebruik word nie.
- Voorkom besoedeling van voedsel, voer, drinkwater en eetgerei.

## **SIMPTOME VAN MENSLIKE VERGIFTIGING**

Matig irriterend vir vel en slymvliese. Inname van hoë konsentrasies mag emesis, spiervesel-trilling, hartversnelling, versnelde asemhaling, bloedvatverwyding of selfs stuiptrekkings en bewusteloosheid veroorsaak.

## **NOODHULPBEHANDELING**

Wanneer op liggaamsdele beland, verwyder besoedelde klere en was hare en besoedelde liggaamsdele met seep en water.

Indien in oë beland, spoel oë vir 10 – 15 minute met oorvloedige skoon water.

## **NOTA AAN GENEESHEER.**

Indien groot hoeveelheid ingesluk is moet maagspoel en uitsuigherwinnig toegepas word. Behandel verder simptome.

## GEBRUIKSBEPERKINGS

Om skade te voorkom, moet verhoed word dat dampe of spuitnewel in aanraking kom met of wegdryf na sensitiewe breëblaargewasse, vrugtebome of sierplante of grond waarin sulke plante binne 3 (drie) maande gekweek gaan word of graansoorte wat in 'n gevoelige groeistadium is. Dien die produk streng volgens die gebruiksaanwysings toe en neem die windspoed en windrigting soos aangedui in die volgende tabel, in ag wanneer toediening gemaak word.

DIE WINDSPOED EN WINDRIGTING TYDENS TOEDIENING SAL DIE AFSTAND TUSSEN DIE NAASTE RAND VAN DIE GEBIED WAT BESPUIT MOET WORD EN DIE GEVOELIGE GEWASSE BEPAAL		
WINDSPOED km/h	LUGTOEDIENING	GRONDTOEDIENING
1,5 - 5,0	800 m windaf 800 m dwarswind 15 m windop	200 m windaf 200 m dwarswind 6 m windop
5,0 - 10,0	1 600 m windaf 800 m dwarswind 15 m windop	400 m windaf 200 m dwarswind 1,5 m windop
10,0 - 15,0	3 200 m windaf 800 m dwarswind 15 m windop	800 m windaf 400 m dwarswind 1,5 m windop
Meer as 15,0	Verbode	Verbode

Moenie **MCPA 400 SL** enigsins in kwekerye, óf naby óf op óf oor kwekery plantmateriaal aanwend nie.

### WEERSTANDSWAARSKUWING:

Vir weerstandsbestuur is **MCPA 400 SL** as 'n Groepkode O onkruidodder geklassifiseer. Enige populasie van 'n spesifieke onkruid mag individue insluit wat 'n natuurlike weerstand teen **MCPA 400 SL**, of enige ander Groepkode O onkruidodder het. Indien hierdie onkruidodders herhaaldelik aangewend word, kan die weerstandbiedende individue uiteindelik die onkruidpopulasie oorheers. Hierdie weerstandbiedende onkruid sal moontlik nie deur **MCPA 400 SL** of enige ander Groepkode O onkruidodder, beheer word nie.

Om weerstand teen onkruidodders te vertraag:

- Vermy die eksklusiewe herhaaldelike gebruik van onkruidodders in dieselfde onkruidodder groepkode. Wissel af met, of gebruik tenkmengsels van produkte in verskillende onkruidoddergroepkodes.
- Integreer ander beheermaatreëls (chemies, verbouing, biologies) in onkruidbeheerprogramme.

Vir spesifieke inigting oor weerstandsbestuur, kontak die registrasiehouer van hierdie produk.

### **GEBRUIKSAANWYSINGS: Gebruik slegs soos aangedui.**

**GRONDTOEDIENING:** Vermy fyn druppelgroottes. Gebruik laedruk platwaaierspuitpunte van 80E of ekwivalente anti-wegdrywing tipe. Die spuitdruk moet nie 200 kPa oorskry nie. Die toedieningsvolume moet minstens 150 liter per hektaar wees. 'n Spuihoogte van 50 cm bokant die teiken en 'n grondspoed van 10 km per uur moet nie oorskry word nie. Indien die windspoed hoër is as 15 km per uur (soos bepaal met 'n handwindmeter wat deur die Registrateur, Wet 36 van 1947 goedgekeur is) moet bespuiting gestaak word of die produk nie toegedien word nie. Die verskil tussen die nat-en droëbollesings, soos met 'n swaaihigrometer bepaal, moet nie 8 °C oorskry nie.

Om tydens breedwerpige toediening met grondtoerusting die beste resultate te verkry, moet minstens 200 ℓ van die spuitmengsel / ha vir voor-opkoms en minstens 150 ℓ / ha vir na-opkoms bespuiting gebruik word.

### **LUGTOEDIENING**

**MCPA 400 SL mag nie uit die lug in KwaZulu Natal toegedien word nie.**

Lugtoediening van **MCPA 400 SL** mag slegs deur 'n geregistreerde Lugbespuitingsoperateur met 'n geregistreerde en korrek gekalibreerde vliegtuig volgens die instruksies van SANS Kode 10118 (The Aerial Application of Agricultural Remedies) 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 die minimum beperk word. Dit is daarom belangrik om aan die volgende kriteria te voldoen:

#### **Toerusting:**

- Gebruik geskikte atomiseringsapparaat (hidroliese spuitkoppe of roterende atomiseerders) wat die vereiste druppelgrootte en bedekking sal produseer, maar wat die minste verlies van produk deur wegdrywing en/of verdamping sal verseker. Die spuitstelsel moet 'n druppelspektrum met die kleinste moontlike Relatiewe Span produseer.

- Om te verhoed dat druppels binne die vlerkpuntvorteks inbeweeg moet alle atomiseerders of spuitkoppe in die binneste 60 tot 75 % van die vlerkspan geplaas word.
- Die gebruik van 'n geskikte en geregistreerde drywings-bekampingsmiddel en / of lae drywing spuitkoppe bv. reguit straal spuitkoppe („straight stream nozzles“) word aanbeveel. In die geval van vastevlerk vliegtuie met 'n vliegspoed hoër as 130 mph, mag die defleksiehoek van die spuitkoppe of spuitstraal, soos gemeet vanaf 'n horisontale reguit lyn na agter, nie 30 grade oorskry nie. In die geval van vastevlerk vliegtuie met 'n stadiger vliegspoed, mag die defleksiehoek, soos hierbo beskryf, nie 55 grade oorskry nie.

### **Toedieningsvereistes**

- Volume: 'n Spuitemngsel toedieningsvolume van 30 tot 50 liter per hektaar word aanbeveel. Hierdie produk is nie teen 'n verlaagde toedieningsvolume getoets nie. Die registrasiehouer kan nie effektiwiteit waarborg, of aanspreeklik verantwoordelik gehou word vir enige nadelige effekte indien hierdie produk teen 'n laer toedieningsvolume, as hierbo aanbeveel, toegedien word nie.
- Druppelbedekking: 30 tot 40 druppels per cm<sup>2</sup> moet op die teikenarea herwin word.
- Druppelgrootte: 'n Druppelspektrum met 'n VMD van 300 tot 350 mikrons word aanbeveel. Die produksie van druppels met hoë drywings- en/of verdampingspotensiaal (kleiner as 150 mikrons) moet tot 'n minimum beperk word.
- Vlieghoogte: Handhaaf 'n vlieghoogte met die spuitbalk 3 tot 4 meter bo die teikenarea. Moenie spuit wanneer die vliegtuig duik, uitklim of draai nie.
- Gewas- en/of onkruidruigheid : Dien toe voordat die gewas en/of onkruid te ruig word wat sal verhoed dat onkruid met die spuitstof behoorlik bedek word.

### **Meteorologiese toestande:**

- Die verskil in temperatuur tussen die nat- en droëboltermometer van 'n swaaihygrometer, moet nie 8 °C oorskry nie.
- Staak bespuiting indien die windspoed 15 km/h oorskry.
- Staak bespuiting tydens turbulente, onstabiele en droë toestande gedurende die hitte van die dag, waneer styg en delende konveksie windbewiging mag plaasvind.
- Bespuiting onder temperatuur inversie toestande (deur bo of binne die inversie laag te spuit) en/of hoë lugvog toestande (relatiewe humiditeit 80 % en meer) mag tot volgende probleme aanleiding gee:
  - verlaagde effektiwiteit aangesien die druppels as 'n wolk in die lug bly hang en moontlik kan verdamp (onvoldoende bedekking op teiken),
  - skade aan nie-teiken gewasse of sensitiewe areas as gevolg van wegdrywing van die spuitnewel na nie-teiken areas.

### **Algemeen:**

- Verseker dat die Lugbespuitingsoperateur presies weet watter lande bespuit moet word.
- Dit is noodsaaklik om 'n versekering van die Lugbespuitingsoperateur te verkry dat aan al die bogenoemde vereistes voldoen sal word en dat data van belang in 'n logboek saamgevat is vir toekomstige verwysing.



**VOOR-OPKOMBEHANDELING:** Plant die gewas in onkruidvrye, klam grond, onmiddellik nadat die saadbed fyn voorberei is. Vir beheer van eenjarige grasse, soos aangedui, moet toediening voor-opkoms van die grassaailinge geskied.

**NA-OPKOMSBEHANDELING:** Dien slegs toe as die gewas in die korrekte ontwikkelingstadium is, soos aangedui. Onkruid moet slegs tydens die jong stadium en as dit aktief in klam grond groei, bespuit word. Reën een dag na toediening sal nie die doeltreffendheid van die onkruiddoder benadeel nie.

## TOEDIENINGSHOEVEELHEDE

GEWAS	DOSIS (ℓ/ha)	OPMERKINGS
<b>GARS EN ROG</b>	2,0 - 4,0	Dien toe slegs as gewas in die 5-blaarstadium (5 blare aan die hoofhalm met die sesde blaar reeds sigbaar) tot 7-blaarstadium is.
<b>GRAANSORGHUM</b>	2, 50	Dien toe as gewas 150 tot 250 mm hoog is (sowat 3 weke na opkom). Indien toediening op 'n later stadium geskied, moet gerigte bespuiting met valarms gebruik word. Moenie onder koue en / of nat toestande toedien nie, aangesien die gewas onder sulke toestande moontlik benadeel kan word.
<b>GRASPERKE</b> (slegs gevestig)	4,0 - 5,25	Dien slegs toe op gevestigde gras d.w.s. wat oor 'n goed ontwikkelde sekondêre wortelsisteem beskik en wat reeds tweemaal gesny is. Bemes vooraf soos vir grasweidings. Meer as een bespuiting mag nodig wees.
<b>GRASWEIDING</b> (slegs gevestig)	4,0 - 5,25	'n Toediening van stikstofhoudende kunsmis, 2 tot 3 weke voor bespuiting word aanbeveel.  BELANGRIK: Dien <b>MCPA 400 SL</b> slegs aan goed gevestigde grasweidings toe d.w.s wat oor 'n goed ontwikkelde sekondêre wortelsisteem beskik en wat reeds tweemaal beweï of gesny is.
<b>HAWER</b>	1,33	Dien toe slegs as die gewas in die 5-blaarstadium (5 blare aan die hoofhalm met die sesde blaar reeds sigbaar) tot 6-blaarstadium is.

<b>GEWAS</b>	<b>DOSIS (ℓ/ha)</b>	<b>OPMERKINGS</b>
<b>KORING</b>	2,0 - 4,0	Dien toe tussen groeistadia 7 (middelste dubbelriwwe vergroot) en 13 (baard van boonste syaartjies verleng) volgens die LNR Kleingraaninstituut Bethlehem se groeistadium lys. Raadpleeg die verskaffer. Dosis keuse hang af van onkruid groeistadium.
<b>MIELIES</b>	2,50	Spuit slegs nadat gewas 45 cm hoog is en dien toe as 'n tussenry gerigte bespuiting deur middel van valarms sodat spuitstof nie in die kelke van mielieplante te lande kom nie. Grasonkruid wat op dié stadium reeds opgekom het, sal nie beheer word nie. Moenie onder koue en / of nat toestande toedien nie, aangesien die gewas onder sulke toestande moontlik benadeel kan word.
<b>SUIKERRIET</b> (Voor-opkom van plant- of opslagriet)	6,25 - 8,75	Hierdie behandeling kan die suikerriet beskadig maar die risiko hiervan sal verminder word indien die toediening so gerig word dat benatting van die rietblare so ver moontlik voorkom word. Dien breedwerpig toe in 300 tot 400 ℓ water/ha binne enkele dae na plant of kap van die riet, en voor-opkoms van die onkruid. Gebruik die laer dosis vir ligte grondtipes.
<b>SUIKERRIET</b> (Na opkom van plant- of opslagriet)	6,25 - 8,75	Dien as 'n gerigte tussenry bespuiting toe in 300 - 400 liter water per ha op 'n jong stadium van die onkruid. As die gewas 40 cm of hoër is (meer as 5 blare per spruit oopgevou het), is gerigte bespuiting noodsaaklik sodat benatting van die rietblare vermy word, anders kan dit die groei vertraag.
<p><b>SUIKERRIET:</b> LET WEL: Vir die beheer van 'n wyer reeks breëblaaronkruid, jong grasse en ook uintjies (<i>Cyperus</i> spp) in suikerriet word 'n kombinasiebespuiting van <b>MCPA 400 SL</b> met DIURON of AMETRYN aanbeveel. Vir volledige besonderhede van gebruiksaanwysings raadpleeg die DIURON of AMETRYN etikette.</p>		

GEWAS	DOSIS ℓ/ha	OPMERKINGS
<p><b>APPELS, PERE, PERSKES EN WINGERDE</b>            1. Vir die beheer van <i>Plantago lanceolata</i> en <i>Ipomoea coscinosperma</i> in Wes-Kaap</p>	<p>5,0 ℓ/400-500 liter water/ha            (kolbehandeling: 170 mℓ/15 liter water).</p>	<p>Dien slegs as 'n gerigte bespuiting toe.</p> <p>Neem voorsorgmaatreëls om te verhoed dat 'n spuitnewel wat wegdrywing sal veroorsaak, gevorm word.</p> <p><b>Metode 1:</b> Dien een bespuiting op die onkruid toe na blomtyd van die gewas, wanneer die vruggies steeds baie klein is.</p> <p><b>Metode 2:</b> Dien twee bespuitings op die onkruid toe. Die eerste bespuiting met groenpunt, maar voor die bloeisels verskyn en die tweede bespuiting na bloeityd wanneer die vruggies steeds klein is.</p>

GEWAS	DOSIS l/ha	OPMERKINGS
<p>2. Vir die beheer van eenjarige en sekere meerjarige breë-blaaronkruid.</p>	<p><b>Vroeë winter:</b> 1,5 - 2,0 l <b>PLUS</b> 2,0 - 3,0 l <b>MAMBA 360 SL</b> (L4817)</p> <p><b>OF</b> 1,5 - 2,2 l <b>MAMBA MAX 480 SL</b> (L7714) per hektaar</p> <p><b>OF</b> 1,5- 2,2 l <b>MAMBA DMA 480 SL</b> (L8388) per hektaar</p> <p><b>Laat winter:</b> 2,0 - 3,0 l <b>PLUS</b> 3,0 - 4,5 l <b>MAMBA 360 SL</b> (L4817)</p> <p><b>OF</b> 2,2 - 3,3 l <b>MAMBA MAX 480 SL</b> (L7714) per hektaar</p> <p><b>OF</b> 2,2 - 3,3 l <b>MAMBA DMA 480 SL</b> (L8388) per hektaar</p>	<p>Dien as gerigte bespuiting voor blom en minstens sewe dae na snoei en verwydering van groen waterlote toe.</p> <p>Dien toe wanneer onkruid soos bv. <i>Plantago lanceolata</i> en <i>Erodium moschatum</i> (Turkse nael) jonk en aktief-groeiend is.</p> <p>Wanneer onkruid volgroeid raak.</p>

## WAARSKUWINGS, AANGAANDE DIE GEBRUIK VAN MCPA 400 SL IN BOORDE EN WINGERD:

1. Moenie die bome of wingerde direk bespuit nie. Rig die bespuiting na die basis van die stamme op die grond. Spuit slegs op 'n stil dag sonder wind. Moet nie boorde of wingerd bespuit indien daar 'n ander gewas tussen die bome of wingerd <sup>1</sup> geplant is nie. Gebruik slegs spuittoerusting waarmee onkruidodders toegedien word. Moenie dieselfde toerusting vir insek- of swamdodertoedienings op boorde en wingerde gebruik nie.
2. Vir optimale resultate in boorde of wingerd, neem die volgende in ag:
  - 2.1 Moenie onkruid onmiddellik voor of na besproeiing bespuit nie.
  - 2.2 Moenie spuit as reën binne 6 uur verwag word nie.
  - 2.3 Reën kort na bespuiting mag 'n negatiewe invloed op resultate hê.
3. Moenie **MCPA 400 SL** enigsins in kwekerye, òf naby, òf op òf oor kwekery plantmateriaal aanwend nie.

## ONKRUIDSOORTE WAT NORMAALWEG DEUR MCPA 400 SL BEHEER WORD

### VOOR- EN NA-OPKOM:

<i>Ageratum conyzoides</i>	Bokkruid
<i>Amaranthus thunbergii</i>	Rooi misbredie
<i>Amaranthus spinosus</i>	Doringmisbredie
<i>Arctotis leiocarpa</i>	Gousblom
<i>Arctotis venusta</i>	Wit gousblom
<i>Bidens bipinnata</i>	Spaanse knapsekêrel
<i>Bidens pilosa</i>	Gewone knapsekêrel
<i>Chenopodium album</i>	Wit hondebossie
<i>Commelina benghalensis</i>	Wandelende Jood
<i>Cosmos bipinnatus</i>	<i>Kosmos</i>
<i>Galinsoga parviflora</i>	Knopkruid
<i>Portulaca oleracea</i>	Gewone porslein
<i>Raphanus raphanistrum</i>	Ramenas
<i>Sysimbrium thellungii</i>	Wildemosterd
<i>Tagetes minuta</i>	Langkakiebos
<i>Vicia hirsuta</i>	Ringelwieke
<i>Vicia sativa</i>	Gewone wieke

**SLEGS VOOR-OPKOM:***Brachiaria eruciformis**Eleusine indica**Panicum schinzii**Setaria verticillata**Sorghum verticilliflorum*

Litjiesinjaalgras

Jongosgras

Vleibuffelgras (vroeg ontkiemend)

Klitssetaria

Gewone wilde sorghum

**SLEGS NA-OPKOM:***Datura ferox* (2-3 blaarstadium)*Datura stramonium* (2-3 blaarstadium)*Polygonum aviculare**Striga asiatica**Tribulus terrestris**Xanthium strumarium**Xanthium spinosum*

Grootstinkblaar

Gewone stinkblaar

Voëlduisendknoop

Rooibloom

Gewone dubbeltjie

Kankerros

Boetebossie

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