

## WINFIELD® UNITED

Soybean Crop Manual





## WINFIELD UNITED

## Soybean Crop Manual

Our comprehensive portfolio of Soybean products is provided in a quick reference guide. The aim is to communicate a summary positioning in crop phenological stage (timing of application), features of the product, do's and don'ts, and use rates in an easy one-page format.

Note that crop protection advisors and farmers must always comply with the recommendations on the official label according to the Act (Act 36 of 1947).

Integrated crop management is the most important and sustainable approach to designing and managing crop protection systems. It is a careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimise risks to human health and the environment.

Click on section links on the right to go through relevant sections.





## Soybean Growth Stage Spray Programme

Description of stages		Pre plant "Burn down"	Planting	Germination and Emergence: VE	Vegetative Growth: V2-V3	Vegetative Growth: V3-V8	Flowering: R1-R3	Pod and Seed Development	Ripening/ Harvesting
BROADLEAF AND ANNUAL	Option 1	SLASH 710 SG							
GRASSES	Option 2	SLASH 540 SL							
	Option 1	2,4-D AMINE 480 SL	ZEONA 840 WDG						
BROADLEAF WEEDS	Option 2		FLUMETSULAM 800 WDG						
PRE EMERGANCE GRASS	Option 1		PALLADIUM 960 EC						
YELLOW NUTSEDGE AND BROAD-LEAF WEEDS	Option 1				HORNET 480 SL	HORNET 480 SL			
	Option 1					SLASH 710 SG			
POST EMERGENCE GRASS,	Option 2					SLASH 540 SL			
YELLOW NUTSEDGE AND BROADLEAF WEEDS	Option 3					ELEGANCE SUPER 700 WDG			
	Option 4					MALLET 100 SL			
POST-EMERGENT GRASS	Option 6					SERIES 240 EC			
	Option 1						INDICATE 250 SC		
SOYBEAN RUST	Option 2						D-ZOLE 250 EC		
SOTBEAN RUST	Option 3						MYCOBLOCK 250 SC + SANTANA 480 SC		
	Option 4						ACADAMY 250 SC + SANTANA 480 SC		
CUTWORM			LAMBDA SECURE 106 CS						
	Option 2		LAMBDA 50 EC						
AFRICAN BOLLWORM					ADDITION 150 SC	ADDITION 150 SC	ADDITION 150 SC	ADDITION 150 SC	
					LAMBDA SECURE 106 CS	LAMBDA SECURE 106 CS	LAMBDA SECURE 106 CS	LAMBDA SECURE 106 CS	
					LAMBDA 50 EC	LAMBDA 50 EC	LAMBDA 50 EC	LAMBDA 50 EC	
	Option 4				LINEAR 350 EC	LINEAR 350 EC	LINEAR 350 EC	LINEAR 350 EC	
ADJUVANTS	Option 1	CLASS ACT NG			VILLA 51	CLASS ACT NG		CLASS ACT NG	
	Option 2	VELOCITY-DRYMAX				VELOCITY-DRYMAX		VELOCITY-DRYMAX	
	All above	INTERLOCK	INTERLOCK		INTERLOCK	INTERLOCK	INTERLOCK	INTERLOCK	

<sup>\*</sup> Please note that programme is adjusted according to season and IPM principles.



<sup>\*</sup> This programme does not necessarily represent all the products available and must be adjusted to season accordingly.

<sup>\*</sup> Always read the label before use.





Trade name	Active ingredient	Target species
	indoxacarb (oxadiazine)	African bollworm
	indoxacarb (oxadiazine), lambda-cyhalothrin (pyrethroid)	African bollworm
	lambda-cyhalothrin (pyrethroid)	African bollworm, cutworm
	lambda-cyhalothrin (pyrethroid)	African bollworm, cutworm
	lambda-cyhalothrin (pyrethroid) + chlorpyrifos (organophophate)	African bollworm

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Click on product links above to get to more information on this product.





## **ADDITION 150 SC**

Active ingredient: Indoxacarb (oxadiazine) 150g/l (Reg. No. L9146, Act 36 of 1947)

A suspension concentrate stomach and contact insecticide for the control of African bollworm (*Helicoverpa armigera*) in soybeans.





Figure 1 & 2: African bollworm (Helicoverpa armigera)

## **Features**

- ADDITION 150 SC is an IRAC group code 22 insecticide.
- A suspension concentrate stomach and contact insecticide for the control of African bollworm (Helicoverpa armigera) in soybeans.
- Most beneficial insects and predatory mites are unaffected by applications of ADDITION 150 SC.
- Highly effective against all larval instar stages.
- Ground, air and pivot registration.
- Results in paralysis and death withing 1-2 days.

## Do's and don'ts

- DO NOT apply ADDITION 150 SC on Soybeans that are under drought stress.
- Apply as a corrective foliar application at flowering or when the first bollworm eggs or small larvae (less than 10 mm in length) are observed following regular scouting during flowering and pod-set stages.
- A follow-up application 7 to 10 days later will normally be necessary if the first application is made at the early flowering stage or under conditions of continuous reinfestation.
- Larvae that have penetrated pods or are obscured by dense foliage during application may not be adequately controlled. It is therefore essential to ensure thorough coverage of the foliage.
- DO NOT exceed two (2) applications of ADDITION 150 SC per season. Should a third application be needed, use an insecticide with a different mode of action





## USE RATE<sup>†</sup>

- 250 ml ADDITION 150 SC Apply in 300-700 l water per hectare (Ground application).
- 300 ml ADDITION 150 SC Apply in 30 l water per hectare (Arial application).



REGISTRATION DETAILS†
ADDITION 150 SC
Active ingredient: Indoxacarb
(oxadiazine) 150g/ℓ
Reg. No. L9146, Act 36 of 1947
(harmful)

Registration holder: Villa Crop Protection (Pty) Ltd. Reg. No. 1992/002474/07 PO Box 10413, Aston Manor, 1630. Tel. (011) 396-2233



PACKAGING





## **JUDOX 148 SC**

Active ingredient: Indoxacarb (oxadiazine) 127.5 g/ $\ell$ , lambda-cyhalothrin (pyrethroid) 20 g/ $\ell$  (Reg. No. L10779, Act 36 of 1947)

A suspension concentrate stomach and contact insecticide for the control of African bollworm (*Helicoverpa armigera*) in soybeans.





Figure 1 & 2: African bollworm

## Features

- JUDOX 148 SC is an IRAC group code 3 and 22 insecticide.
- JUDOX 148 SC has two active ingredients in one product, ensuring good resistance management.
- Indoxacarb is a non-systemic, highly lipophilic, contact and stomach insecticide with a long residual effect on leaves.
- The main mode of action of indoxacarb is through blocking of neuronal sodium channels.
- Application of JUDOX 148 SC stops insect feeding immediately after application.
- Paralysis and death occurs within 1-2 days of application.
- Registered for ground and aerial application.

## Do's and don'ts

- Apply as an early corrective treatment when the pest is first noticed.
- Apply as a full cover spray in 200 to 300 liters water per hectare.
- Under conditions of high infestation pressure, apply JUDOX 148 SC in a 7-day spray programme.
- DO NOT exceed two (2) applications of JUDOX 148 SC per season.
- DO NOT apply when bees are most active. Do not direct spray towards beehives or allow spray drift in their vicinity.





## USE RATE<sup>†</sup>

- Ground Application: JUDOX 148 SC 80-120 ml/ha + CHARGE 20 ml/100 l water.
- Apply in 300 l spray mixture per hectare.



## REGISTRATION DETAILST JUDOX 148 SC

Active ingredient: Indoxacarb (oxadiazine) 127.5 g/l, lambdacyhalothrin (pyrethroid) 20 g/l Reg. No. L10779, Act 36 of 1947 (harmful)

## JUDOX 148 SC

Active ingredient: Indoxacarb (oxadiazine) 127.5 g/l, lambdacyhalothrin (pyrethroid) 20 g/l Reg. No. L10779, Act 36 of 1947 (harmful)

## CHARGE

Active ingredient: Polyetherpolymethylsiloxane-copolymer 1000 g/l Reg. No. L9100, Act 36 of 1947 (caution)

Registration holder: Villa Crop Protection (Pty) Ltd. Reg. No. 1992/002474/07 PO Box 10413, Aston Manor, 1630. Tel. (011) 396-2233



PACKAGING





## LAMBDA 50 EC

Active ingredient: Lambda-cyhalothrin (pyrethroid) 50g/l (Reg. No. L7785, Act 36 of 1947)

An emulsifiable concentrate contact and stomach insecticide for the control of African bollworm (*Helicoverpa armigera*) and cutworm (*Agrotis ipsilon*) in soybeans.





Figure 1 & 2: African bollworm (Helicoverpa armigera)

## **Features**

- LAMBDA 50 EC is an IRAC group code 3 insecticide.
- An emulsifiable concentrate contact and stomach insecticide for the control of cutworm (Agrotis ipsilon), and African bollworm (Helicoverpa armigera) in soybeans.
- Rapid knockdown effect.
- Stops feeding immediately.
- Single product for the control of several pests.
- Effective against first and second instar of target pests.
- Ground and aerial application.

## Do's and don'ts

- APPLY as soon as soon as the infestation is noticed and repeat if necessary.
- DO NOT exceed the maximum of 2 applications per season.
- For cutworm STRICTLY apply only if the top 3 cm of the soil is moist
- Do not mix LAMBDA 50 EC with seaweed extracts.
- For optimum control the larvae should not exceed 10 mm (1 cm) in length at the time of application.
- Do not apply to plants wet from dew or rain.
- Effectiveness of LAMBDA 50 EC can be affected by hard water and pH (ideal pH is 5-8).





## USE RATE<sup>†</sup>

- 120 ml LAMBDA 50 EC Apply in 200-300 l water per hectare (Ground application).
- 120 ml LAMBDA 50 EC Apply in 30 l water per hectare (Arial application).



REGISTRATION DETAILS†
LAMBDA 50 EC
Active ingredient: Lambda-cyhalothrin
(pyrethroid) 50g/ℓ
Reg. No. L7785, Act 36 of 1947
(harmful)

Registration holder: Villa Crop Protection (Pty) Ltd. Reg. No. 1992/002474/07 PO Box 10413, Aston Manor, 1630. Tel. (011) 396-2233



PACKAGING 1 l, 5 l







## LAMBDA SECURE 106 CS

Active ingredient: Lambda-cyhalothrin (pyrethroid) 106 g/l (Reg. No. L8939, Act 36 of 1947)

A capsuled suspension concentrate contact and stomach insecticide for the control of African bollworm (*Helicoverpa armigera*) in soybeans.





Figure 1 & 2: African bollworm (Helicoverpa armigera)

## **Features**

- LAMBDA 106 CS is an IRAC group code 3 insecticide.
- A capsuled suspension concentrate contact and stomach insecticide for the control of African bollworm (Helicoverpa armigera) in soybeans.
- · Rapid knockdown effect.
- Long residual action due to encapsulation.
- Effective against first and second instar of target pests.
- Ground and aerial application.

## Do's and don'ts

- Apply as soon as soon as the infestation is noticed and repeat if necessary.
- For optimal control of susceptible bollworm populations, the larvae should not exceed 10 mm (1 cm) in length, at time of application.
- DO NOT exceed the maximum of 2 applications per season.
- Ensure good coverage of plants.
- DO NOT apply on plants that are wet from dew or rain.
- DO NOT mix LAMBDA SECURE 106 CS with seaweed extracts.
- Effectiveness of LAMBDA SECURE 106 SC can be affected by hard water and pH (ideal pH is 5-8).





## USE RATE<sup>†</sup>

- 60 ml LAMBDA SECURE 106 CS Apply in 200-300 l water per hectare (Ground application).
- 60 ml LAMBDA SECURE 106 CS Apply in 30 l water per hectare (Arial application).



REGISTRATION DETAILS†
LAMBDA SECURE 106 CS
Active ingredient: Lambda-cyhalothrin
(pyrethroid) 106 g/ℓ
Reg. No. L8939, Act 36 of 1947
(harmful)

Registration holder: Universal Crop Protection (Pty) Ltd. Reg. No. 1983/008184/07 PO Box 801, Kempton Park, 1620. Tel. (011) 396-2233



PACKAGING 1 l. 5 l





## INSECTICIDE

## Active ingredient: Lambda-cyhalothrin (pyrethroid) 12 g/ $\ell$ & Chlorpyrifos (organo-phosphate) 338 g/ $\ell$ (Reg. No. L8602, Act 36 of 1947)

An emulsifiable concentrate contact and stomach insecticide for the control of fall army worm (Spodoptera frugiperda) and African bollworm (Helicoverpa armigera) in soybeans.





Figure 1: Fall army worm, Figure 2: African bollworm

## **Features**

• LINEAR 350 EC is an IRAC group code 3A/1B insecticide.

LINEAR 350 EC

- An emulsifiable concentrate contact and stomach insecticide for the control of African bollworm (Helicoverpa armigera) and fall army worm (Spodoptera frugiperda) in soybeans.
- · Good knockdown effect.
- Two modes of action reduces the risk of resistance development and provides improved control.

## Do's and don'ts

- Apply at first signs of an infestation, as soon as feeding damage is observed.
- Apply as a full cover spray when the pest is noticed (L1 - L2 larval instars).
- Apply a follow-up treatment seven (7) days later.
- Do not apply more than two (2) LINEAR 350 EC applications per season.
- Registration for control of fall arm worm is based on limited data and experience. Use is at the sole risk and responsibility of the producer.
- Producers are advised to test spray a small area before using LINEAR 350 EC on a large scale.
- Do not mix seaweed extracts with LINEAR 350 EC







## USE RATE<sup>†</sup>

- 500 ml LINEAR 350 EC Apply in 200-400 l water per hectare + 20 ml/100 l CHARGE (Ground application).



## REGISTRATION DETAILST LINEAR 350 EC

Active ingredient: Lambda-cyhalothrin (pyrethroid) 12 g/l & Chlorpyrifos (organo-phosphate) 338 g/l Reg. No. L8602, Act 36 of 1947 (harmful)

## CHARGE

Active ingredient: Polyether-polymethylsiloxane-copolymer 1000 g/ $\ell$  Reg. No. L9100, Act 36 of 1947 (caution)

Registration holder: Universal Crop Protection (Pty) Ltd. Reg. No. 1983/008184/07 PO Box 801, Kempton Park, 1620. Tel. (011) 396-2233



PACKAGING 5 ℓ











Trade name	Active ingridient	Target species
	(2,4-dichlorophenoxy) acetic acid	Broad-leaf weeds
	Chlorimuron-ethyl (sulphonyl-urea)	Yellow nutsedge & pigsweed
	flumetsulam (triazolopyrimidine sulfonanilide)	Grass & broad-leaf weeds
	bendioxide (thiadiazine)	Certain annual broad-leaf weeds and yellow nutsedge
	imazethapyr (imidazolinone)	Grass & broad-leaf weeds
	s-metolachlor (chloroacetamide)	Annual grasses
	clethodim (cyclohexanedione)	Grass weeds & volunteer maize
	glyphosate (glycine)	Annual and perennial weeds
	glyphosate (glycine)	Annual and weeds
	diclosulam (triazolopyrimidine sulfonanilide)	Broad-leaf weeds

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Click on product links above to get to more information on this product.





## 2,4-D AMINE 480 SL

Active ingredient: (2,4-dichlorophenoxy) acetic acid 480 g/kg (2,4-D-dimethylammonium) 580 g/kg (Reg. No. L4505, Act 36 of 1947)

A water-soluble herbicide with selective hormone action for the control of broad-leaved weeds as a "burndown" in soybeans.







Figure 1: Chenopodium album. Figure2: Amaranthus hybridus. Figure 3: Bidens Pilosa.

## **Features**

- 2,4-D AMINE 480 SL is an HRAC group code O herbicide.
- A water-soluble herbicide with selective hormone action for the control of broad-leaved weeds as an "Burndown" in soybeans.
- Very selective for the control of annual broad leaf weeds.
- Does not control grass weeds after emergence.
- Herbicides that act this way are called auxin-type herbicides.
- This product contains a phenoxy herbicide.

## Do's and don'ts

- 2,4-D AMINE 480 SL can be applied in tank mixtures with SLASH PLUS 540 SL and SLASH 710 SG for improved control of certain broad-leaf weeds.
- To prevent crop damage DO NOT plant soybeans within 14 days following a pre-plant application with 2,4-D AMINE 480 SL, to prevent crop damage.
- Do not apply this product by air in KwaZulu-Natal.
- Do not permit drift, vapour or spray mist to come into contact with sensitive broad-leaf crops, fruit trees or ornamentals.







## USE RATE<sup>†</sup>

- 0.5 \( \extrm{2,4-D AMINE 480 SL.} \)
Apply in 200-400 \( \extrm{\extrm{water per hectare}} \)
(ground application).



## REGISTRATION DETAILS†

2,4-D AMINE 480 SL Active ingredient: (2,4-dichlorophenoxy) acetic acid 480 g/kg Reg. No. L4505, Act 36 of 1947 (harmful)

## SLASH 710 SG

Active ingredient: Glyphosate (glycine) 710 g ae/kg (glyphosate ammonium salt) 780 g/kg Reg. No. L8450 , Act 36 of 1947 (caution)

## SLASH PLUS 540 SL

Active ingredient: Glyphosate (glycine) 540 g ae/ℓ (glyphosate potassium salt) 665 g/ℓ Reg. No. L8819, Act 36 of 1947 (caution)

## Registration holder:

Universal Crop Protection (Pty) Ltd. Co. Reg. No. 1983/008184/07 PO Box 801, Kempton Park, 1620. Tel. (011) 396-2233



PACKAGING 1 l, 2.5 l, 5 l and 20 l





## **ELEGANCE SUPER 750 WDG**

Active ingredient: Chlorimuron-ethyl (sulphonyl-urea) 750 g/kg (Reg. No. L9158, Act 36 of 1947)

A water dispersible granule herbicide for the control of weeds in soybeans.







Figure 1: Amaranthus hybridus (pigweed/misbredie)

Figure 2: Cyperus esculentus (yellow nutgrass / geeluintiies)

Figure 3: Cyperus esculentus (yellow nutgrass/ geeluintjie) Note: ELEGANCE SUPER 750 WDG provides variable control at the rate recommended for soybeans.

## **Features**

- ELEGANCE SUPER 750 WDG is an HRAC group code B herbicide (New Group Code 2).
- Inhibition of the enzyme Acetolactate Synthase (ALS Inhibition).
- Inhibits the amino acids essential to plant growth.
- ELEGANCE SUPER 750 WDG is a highly selective, post emergent herbicide.
- Highly systemic with rapid translocation throughout the weeds.
- Rapid inhibition of cell division results in rapid ceasing of root and shoot growth (within hours) and plant death within days of treatment.
- Compatible with glyphosate, enabling control of both grass and broad-leaf weeds in a single application.

## Do's and don'ts

- DO NOT use ELEGANCE SUPER 750 WDG when the crop is growing under stress conditions.
- Do not apply ELEGANCE SUPER 750 WDG before the 3rd soybean trifoliate opens or not later than 60 days before soybean maturity.
- DO NOT apply ELEGANCE SUPER 750 WDG when weeds are covered with rain or dew or if rain is expected within an hour.
- \* DO NOT apply ELEGANCE SUPER 750 WDG in tank mixes with organophosphate insecticides.
- WAITING PERIODS for follow-up crops after an ELEGANCE SUPER 750 WDG application: Wheat (3 Months) and any other crop (9 Months).
- Never leave the spray mixture for longer than 6 hours or overnight.



## HERBICIDE



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### LISE RATE!

- 14 g ELEGANCE SUPER 750 WDG
  + 2 \( \) SLASH PLUS 540 SL OR
  1.5 Kg GLYGRAN 710 SG + a suitable surfactant/
  penetrant like 1 % CLASS ACT NG
  (Use only CLASS ACT NG when SLASH PLUS 540 SL
  OR GLYGRAN 710 SG are present)
  Apply in 100-400 \( \) water per hectare
  (Ground application)
- 14 g ELEGANCE SUPER 750 WDG + 2 & SLASH PLUS 540 SL OR 1.5 Kg GLYGRAN 710 SG + 1% CLASS ACT NG (Use only CLASS ACT NG when SLASH PLUS 540 SL OR GLYGRAN 710 SG are present) + an anti-drift agent; Apply in 30-50 & water per hectare (Arial application)



(caution)

### REGISTRATION DETAILS† ELEGANCE SUPER 750 WDG Active ingredient: Chlorimuron-ethyl (sulphonyl-urea) 750 g/kg Reg. No. L9158, Act 36 of 1947

Registration holder: Villa Crop Protection (Pty) Ltd. Reg. No. 1992/002474/07

Reg. No. 1992/002474/07 PO Box 10413, Aston Manor, 1630. Tel. (011) 396-2233 SLASH PLUS 540 SL

(glyphosate potassium salt) 665 g/l Reg. No. L8819, Act 36 of 1947 (caution) Registration holder:

Active ingredient: Glyphosate (glycine) 540 g ae/&

Registration indier. Universal Crop Protection (Pty) Ltd. Reg. No. 1983/008184/07 PO Box 801, Kempton Park, 1620. Tel. (011) 396-2233

CLASS ACT NG Active ingredient: Ammonium sulphate  $480g/\ell$  Reg. No. L10477, Act 36 of 1947 (caution)

Registration holder: Winfield Solutions Registration Holdings (Pty) Ltd Reg. No. 2015/312008/07 PO Box 10413, Aston Manor, 1630 Tel. (011) 396-2233



PACKAGING 10 X 14g (140g)







## FLUMETSULAM 800 WDG

Active ingredient: Flumetsulam (triazolopyrimidine sulfoanilide) 800 g/kg (Reg. No. L8062, Act 36 of 1947)

A water dispersible granule herbicide for use in a tank mixture for pre-emergence and post-emergence control of weeds in soybeans.









Figure 1. Chenopodium carinatum Figure 2. Chenopodium album Figure 3. Portulaca oleracea Fig 4. Tribulus terrestris

## **Features**

- FLUMETSULAM 800 WDG is an HRAC group code B herbicide (New Group Code 2).
- A water dispersible granule herbicide for the pre- and postemergence control of weeds in soybeans.
- FLUMETSULAM 800 WDG inhibits the enzyme acetolactate synthase (ALS inhibitor) resulting in inhibition of certain branched chain amino acids essential to plant growth.
- It is a highly selective, pre- and post emergent herbicide.
- Highly systemic with rapid translocation throughout the weeds.
- It is critical that pre-emergence residual herbicides are used in soybeans as there are limited post- emergent herbicide options to control broad-leaf weeds in soybeans.
- Used in a tank mixture with METOLACHLOR 960 EC for preemergent control of annual grass weeds.

## Do's and don'ts

- If maize was treated with mesotrione containing products such as CANTRON 480 SC, in the same field during the previous season, soybeans may be adversely affected following a flumetsulam (i.e. FLUMETSULAM 800 WDG) application.
- FLUMETSULAM 800 WDG in a mixture with METOLACHLOR 960 EC must be applied prior to crop emergence of soybeans.
- Do not mix FLUMETSULAM 800 WDG with organophosphate insecticides or use in combination with organophosphate insecticides.
- Do not apply FLUMETSULAM 800 WDG mixtures if rainfall is expected within 6 hours after application.
- Do not apply FLUMETSULAM 800 WDG under cold and wet conditions.





### USE RATE

- 0-10% Clay use 18 g
FLUMETSULAM 800 WDG + 0.7 l
METOLACHLOR 960 EC; 11-20% Clay use 26 g
FLUMETSULAM 800 WDG + 1 l
METOLACHLOR 960 EC; 21-30% Clay use 30 g
FLUMETSULAM 800 WDG + 1.3 l
METOLACHLOR 960 EC; 31-40% Clay use 37.5g
FLUMETSULAM 800 WDG + 1.5 l
METOLACHLOR 960 EC
Apply in 200 l water per hectare
(Ground application).



## REGISTRATION DETAILS† FLUMETSULAM 800 WDG

Active ingredient: Flumetsulam (triazolopyrimidine sulfoanilide) 800 g/kg Reg. No. L8062, Act 36 of 1947 (caution)

## Registration holder

Universal Crop Protection (Pty) Ltd. Reg. No. 1983/008184/07 PO Box 801, Kempton Park, 1620. Tel. (011) 396-2233

## CANTRON 480 SC

Active ingredient: Mesotrione (callistemone) 480 g/ $\ell$  Reg.No. L8365, Act 36 of 1947 (caution)

## Registration holder: Villa Crop Protection (Pty) Ltd. Reg. No. 1992/002474/07

PO Box 10413, Aston Manor, 1630 Tel. (011) 396-2233

## METOLACHLOR 960 EC Active ingredient: metolachlor (chloroacetanilide) 960 g/l

## Reg. No. L7136 Act 36 of 1947 (harmful) Registration holder:

Universal Crop Protection (Pty) Ltd. Reg. No. 1983/008184/07 PO Box 801, Kempton Park, 1620. Tel. (011) 396-2233



PACKAGING 500g







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## USE RATE

- 3 l HORNET 480 SL.
- Apply in 300 \ell water per hectare (Ground application).



REGISTRATION DETAILS†
HORNET 480 SL
Active ingredient: Bendioxide
(thiadiazine) 480 g/l
Reg. No. L7708, Act 36 of 1947
(harmful)

Registration holder: Villa Crop Protection (Pty) Ltd. Reg. No. 1992/002474/07 PO Box 10413, Aston Manor, 1630. Tel. (011) 396-2233



PACKAGING 5 l

## **HORNET 480 SL**

Active ingredient: Bendioxide (thiadiazine) 480 g/l (Reg. No. L7708, Act 36 of 1947)

A selective contact soluble liquid herbicide for the post-emergence control of certain annual broad-leaved weeds and yellow nutsedge (*Cyperus esculentus*) in soybeans.







## **Features**

- HORNET 480 SL is an HRAC group code C3 herbicide.
- A selective contact soluble liquid herbicide for the postemergence control of certain annual broad-leaved weeds in soybeans.
- Photosynthetic electron transport inhibitor.
- Post-emergence control of yellow nutsedge and certain broad-leaf weeds.
- · No risk of carry over.

## Do's and don'ts

- Apply HORNET 480 SL on yellow nutsedge that are actively growing during favourable conditions i.e. (warm conditions, humid & sufficient soil moisture).
- Apply HORNET 480 SL if yellow nutsedge plants are beyond the 4-leaf stage during application.
- Apply in a relative humidity above 65%.
- Do not apply more than 3 litres per hectare since higher dosage rates may cause damage to the crops.







## **MALLET 100 SL**

Active ingredient: Imazethapyr (imidazolinone) 100 g/l (Reg. No. L8049, Act 36 of 1947)

A selective water-soluble herbicide for pre- and post-emergence weed control in soybean.







Fig 1. Amaranthus hybridus, Fig 2. Chenopodium album, Fig 3. Acanthospermum hispidum

## **Features**

- MALLET 100 SL is an HRAC group code B herbicide.
- A selective water-soluble herbicide for pre- and postemergence weed control in soybean.
- MALLET 100 SL (imazethapyr) is a branched chain amino acid synthesis inhibitor.
- MALLET 100 SL is a systemic herbicide, that's absorbed by roots and rapidly translocated to meristematic regions.
- Compatible with various pre-emergence grass herbicides (i.e. alachlor, metazachlor, metolachlor etc.).

## Do's and don'ts

• If a follow up treatment of MALLET 100 SL is intended on soils > 26 % clay, DO NOT apply more than 400 m $\ell$ /ha at pre-emergence.

- Apply the MALLET 100 SL "follow-up" post-emergence treatment 14 to 25 days after the MALLET 100 SL preemergence application.
- Apply MALLET 100 SL as a post-emergence application if conditions prevailed that prevented it from being used as a pre-emergence application.
- DO NOT apply MALLET 100 SL in soybeans, if maize has been treated with mesotrione-containing products, during the previous season on the same field.
- DO NOT use MALLET 100 SL on acid soils with pH below 5.0.
- DO NOT apply the post-emergent treatment on soils below 15% clay.
- DO NOT exceed a dosage rate higher than 700 ml/ha MALLET 100 SL on a field per season.
- DO NOT apply MALLET 100 SL as a post-emergent treatment to certain soybean cultivar. Refer to label
- DO NOT apply MALLET 100 SL with postemergence grass herbicides, due to conflicting modes of action.





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## USE RATE

- O 15 % clay; Apply 300 ml/ha MALLET 100 SL (Pre-emergence) Apply in 200 l water per hectare (Ground application).
- 16 25 % clay; Apply 400 ml /ha MALLET 100 SL (Pre-emergence) followed by 300 ml MALLET 100 SL (Post-Emergence "follow-up" treatment) OR 700 ml MALLET 100 SL(Post-emergence). Apply in 200 l water per hectare (Ground application).
- 26 30 % clay; Either apply 500 ml /ha MALLET 100 SL (Pre-emergence) OR Apply 400 ml/ha MALLET 100 SL (Pre-emergence) followed by 400 ml MALLET 100 SL (Post-Emergence "follow-up" treatment) AND/OR 700 ml MALLET 100 SL (Post-emergence). Apply in 200 l water per hectare (Ground application).



REGISTRATION DETAILS†
MALLET 100 SL
Active ingredient: Imazethapyr
(imidazolinone) 100 g/l
Reg. No. L8049, Act 36 of 1947
(caution)

Registration holder: Villa Crop Protection (Pty) Ltd. Reg. No. 1992/002474/07 PO Box 10413, Aston Manor, 1630. Tel. (011) 396-2233



PACKAGING





## Active ingredient: S-metolachlor (chloroacetamide) 960 g/ $\ell$ (Reg. No. L9360, Act 36 of 1947)

A pre- and early post-emergence emulsifiable concentrate herbicide for the control of most annual grasses and certain broad-leaved weeds in soybeans.







## **Features**

- PALLADIUM 960 EC is an HRAC group code K3 herbicide.
- A pre-emergence emulsifiable concentrate herbicide for the control of most annual grasses like goose grass (*Eleusine indica*) and certain broad-leaved weeds like white goosefoot in soybeans.

PALLADIUM 960 EC

- PALLADIUM 960 EC contains the active s-isomer of metolachlor, a selective pre-emergence herbicide for weed control in soybeans and other row crops.
- PALLADIUM 960 EC is compatible with several broad-leaf herbicides registered in soybeans.
- A selective pre-emergent herbicide absorbed predominantly by the hypocotyls and shoots of germinating weeds.
- Provides variable control of yellow/geeluintjies (Cyperus Esculentus).
- A cell division inhibitor.

## Do's and don'ts

- Use in conjunction with a broad-leaf herbicide.
- Does not control grasses post- emergence.
- Apply immediately after planting but not later than 3 days after planting.
- 10 to 20 mm rain withing 7 to 10 days after application is necessary for good results.
- The PALLADIUM 960 EC plus SYMPHONY 500 WP mixture may be applied 2 weeks prior to planting. By doing this, the risk of crop injury will be reduced.







## USE RATE<sup>†</sup>

- 11-30% Clay use 0.65-1 \( \)
  PALLADIUM 960 EC Apply at 200-300 \( \) water per hectare (Ground application).
- 11-30% Clay use 0.65-1 \( \)
  PALLADIUM 960 EC Apply at 30 \( \)
  water per hectare (Arial application).



## REGISTRATION DETAILS†

PALLADIUM 960 EC Active ingredient: S-metolachlor (chloroacetamide) 960 g/l Reg. No. L9360, Act 36 of 1947 (harmful)

## SYMPHONY 500 WP

Active ingredient: Fumioxazin 500 g/Kg Reg. No. L9300, Act 36 of 1947 (caution)

Registration holder: Villa Crop Protection (Pty) Ltd. Reg. No. 1992/002474/07 PO Box 10413, Aston Manor, 1630. Tel. (011) 396-2233



PACKAGING 10 l, 20 l





## Active ingredient: Clethodim (cyclohexanedione) 240 g/l (Reg. No. L8913, Act 36 of 1947)

A selective systemic herbicide for post-emergence control of grass weeds and volunteer maize (including glyphosate tolerant maize) in soybeans.







## **Features**

• SERIES 240 EC is an HRAC group code A herbicide.

**SERIES 240 EC** 

- A selective systemic herbicide for post- emergence control of grass weeds (*Digitaria sanguinalis*) and volunteer maize (*Zea mays*) in soybeans.
- Glyphosate (GLYGRAN 710 SG) compatible.
- Rapidly absorbed.
- Quick translocation to the growing points of the plant.
- Growing point dies first followed by death of the whole plant.
- Typical symptoms are purple midribs of treated volunteer maize plants.

## Do's and don'ts

• Do not plant maize within 7 days after application for dosage rates up to  $0.5\,\ell$  /ha (Higher rates are not recommended when maize is to be planted as a follow-up crop).

- Allow at least 4 days after the SERIES 240 EC application before applying any other agrochemical treatment
- Apply the higher dosage rate to bigger plants up to 8-leaf stage (1 l/ha SERIES 240 EC).
- Do not apply SERIES 240 EC to large areas of newly released cultivars, before consulting your local SERIES 240 EC representative or distributor, or prior to testing phytotoxicity.
- Apply only during moist conditions, when the weeds are growing actively.
- Do not apply to crop or weeds under stress conditions, as poor control or crop damage may occur.
- Rain or irrigation within one hour of application may require a follow up application.
- SERIES 240 EC must not be used in tank mixtures with any other agrochemical except glyphosate.
- Always use in combination with the following adjuvants: DIRECT or VELOCITY DRYMAX.





## USE RATE<sup>†</sup>

- 0.5-1 l SERIES 240 EC + 2 l
SLASH PLUS 540 SL OR 1.5 Kg
GLYGRAN 710 SG + 100 ml/
100 l water DIRECT (Use CLASS ACT NG only
when SLASH PLUS 540 SL OR GLYGRAN
710 SG are present). Apply in 150 l water per
hectare (Ground application).

REGISTRATION DETAILS† SERIES 240 EC Active ingredient: Clethodim (cyclohexanedione) 240 g/k Reg. No. L8913, Act 36 of 1947 (caution)

SLASH PLUS 540 SL Active ingredient: Glyphos

Active ingredient: Glyphosate (glycine) 540 g ae/ $\ell$  (glyphosate potassium salt) 665 g/ $\ell$  Reg. No. L8819, Act 36 of 1947 (caution)

Registration holder: Universal Crop Protection (Pty) Ltd. Reg. No. 1983/008184/07 PO Box 801, Kempton Park, 1620. Tel. (011) 396-2233

## DIRECT

Active ingredient: Polyether-polymethylsiloxane-copolymer 300 g/ $\ell$  and vegetable oil 650 g/ $\ell$  Reg. No. L8680, Act 36 of 1947 (caution)

VELOCITY-DRYMAX

Active ingredient: Ammonium sulphate 1000 g/kg Reg. No. L9454, Act 36 of 1947 (caution)

Registration holder: Villa Crop Protection (Pty) Ltd. Reg. No. 1992/002474/07 PO. Box 10413, Aston Manor, 1630. Tel. (011) 396-2233



PACKAGING





## Active ingredient: Glyphosate (glycine) 710 g ae/kg (glyphosate ammonium salt) 780 g/kg (Reg. No. L8450, Act 36 of 1947)

A water-soluble granule, non-selective, systemic postemergence herbicide with slight or no soil activity, for the control of perennial and annual weeds in agriculture, as well as in forestry plantations/areas, non-crop and industrial areas.









## **Features**

SLASH 710 SG is a HRAC group code G9 herbicide.

SLASH 710 SG

- A water-soluble granule, non-selective, systemic postemergence herbicide with slight or no soil activity, for the control of annual grasses like (*Digitaria sanguinalis*) and annual broad leaf weeds like (*Alternanthera pungens*) in soybean, as well as in non-crop and industrial areas.
- No carry over in crop rotation systems.
- Quick absorption for rain fastness.
- Broad spectrum of weed control.
- Small packaging footprint for high a.i load.
- Good tank mix partner.

## Do's and don'ts

- Apply SLASH 710 SG when weeds are actively growing up to flowering stage.
- DO NOT spray whilst weeds are wet, dormant, covered with dust or under any sort of stress (drought, cold, heat etc.).
- Being non-selective, avoid spray drift onto non-targeted plants.
- DO NOT apply SLASH 710 SG after sunset or before sunrise
- DO NOT apply SLASH 710 SG when temperatures are high, and humidity is low (avoid application during midday)
- Always use clean and clear water for spray mixture (ADD AMMONIUM SULFATE at 2% solution before adding SLASH 710 SG) to improve the water quality and neutralize salt ions.





### USE RATE<sup>†</sup>

- .5 kg SLASH 710 SG +
  1 % CLASS ACT NG OR
  1% VELOCITY DRYMAX
  Apply in 150 \( \) water per hectare (Ground application).
- 1.5 kg SLASH 710 SG + 1 % CLASS ACT NG OR 1% VELOCITY DRYMAX Apply in ?? \( \) water per hectare (Arial application).



## REGISTRATION DETAILS†

Active ingredient: Glyphosate (glycine) 710 g ae/kg (glyphosate ammonium salt) 780 g/kg Reg. No. L8450 , Act 36 of 1947 (caution)

## Registration holder:

Universal Crop Protection (Pty) Ltd. Co. Reg. No. 1983/008184/07 PO Box 801, Kempton Park, 1620. Tel. (011) 396-2233

## CLASS ACT NG

Active ingredient: Ammonium sulphate 480g/l/ Reg. No. L10477, Act 36 of 1947 (caution)

## Registration holder:

Winfield Solutions Registration Holdings (Pty) Ltd Reg. No. 2015/312008/07 PO Box 10413, Aston Manor, 1630 Tel. (011) 396-2233

## VELOCITY-DRYMAX

Active ingredient: Ammonium sulphate 1000 g/kg Reg. No. L9454, Act 36 of 1947 (caution)

### Registration holder: Villa Crop Protection (Pty) Ltd. Reg. No. 1992/002474/07 PO Box 10413, Aston Manor. 1630.

Tel. (011) 396-2233



PACKAGING 10 kg









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## USE RATE†

- 1.3 l to 2 l SLASH PLUS 540 SL +
   1% CLASS ACT NG OR 1% VELOCITY DRYMAX Apply in 200 l water per hectare (Ground application).
- Rate is determined by weed size and weed species (consult product label).



## REGISTRATION DETAILS† SLASH PLUS 540 SL Active ingredient: Glyphosate (glycine) 540 g ae/ℓ (glyphosate potassium salt) 665 g/ℓ Reg. No. L8819, Act 36 of 1947 (caution)

Registration holder: Universal Crop Protection (Pty) Ltd. Reg. No. 1983/008184/07 PO Box 801, Kempton Park, 1620. Tel. (011) 396-2233

VELOCITY-DRYMAX Active ingredient: Ammonium sulphate 1000 g/kg Reg. No. L9454, Act 36 of 1947 (caution)

Registration holder: Villa Crop Protection (Pty) Ltd. Reg. No. 1992/002474/07 PO Box 10413, Aston Manor, 1630. Tel. (011) 396-2233

CLASS ACT NG Active ingredient: Ammonium sulphate 480g/l Reg. No. L10477, Act 36 of 1947 (caution)

Registration holder: Winfield Solutions Registration Holdings (Pty) Ltd Reg. No. 2015/312008/07 PO Box 10413, Aston Manor, 1630 Tel. (011) 396-2233



PACKAGING 20 ℓ

## **SLASH PLUS 540 SL**

Active ingredient: Glyphosate (glycine) 540 g ae/ $\ell$  (glyphosate potassium salt) 665 g/ $\ell$  (Reg. No. L8819, Act 36 of 1947)

A soluble concentrate, non-selective, systemic post-emergence herbicide with slight or no soil activity for the control of weeds in soybean.











## **Features**

- SLASH PLUS 540 SL is an HRAC group code 9 herbicide.
- A soluble concentrate, non-selective, systemic, postemergence herbicide with slight or no soil activity, for the control of annual grasses and annual broad-leaf weeds in soybeans.
- Uptake (absorption) is fast and cultivation, planting or other soil preparation practices can take place the day after application.
- On contact with the soil, glyphosate binds to the clay particles (adsorption) and is decomposed by soil microbes.
- The product has no soil residual effect, therefore has no root uptake and is safe to follow-up crops after application.
- Annual weeds will wilt within the first week after application and death occurs 14-21 days after application.
- It is rain fast an hour after application on small actively growing annual weeds.
- Product is registered for use on glyphosate tolerant crops.

## Do's and don'ts

- Always use clean water, free of mud and organic material.
- Always apply the product on actively growing, stress free weeds.
- Avoid applications during high temperatures and low relative humidity.
- Do not spray weeds covered with dust.
- Use a minimum volume of 125 \ell spray mixture per hectare.
- The addition of ammonium sulphate (VELOCITY DRYMAX) to the spray mixture is strongly recommended.
- For optimum and consistent results, it is recommended to add a non-ionic surfactant at 0.5% solution to the spray volume







## Active ingredient: Diclosulam (triazolopyrimidine sulfonanilide) 840 g/kg (Reg. No. L9842, Act 36 of 1947)

A selective water-dispersible granular herbicide for the control of weeds in soybean.









## **Features**

• ZEONA 850 WDG is an HRAC group code B2 herbicide.

**ZEONA 840 WDG** 

- A selective water-dispersible granular herbicide for the control of broad weeds like (Tagetes minuta) in soybean.
- Fast acting, thus limits competition from tough broad-leaf weeds intern increasing yields.
- Well documented safety in soybeans, due to limited translocation and rapid metabolism by the soybean plant.
- Good tank mix partner for alachlor or metolachlor, thus expanding the weed control spectrum.
- Application flexibility to fit all tillage systems (conventional, strip and minimum till).
- Provides effective pre-emergence weed control for 10 to 14 weeks

## Do's and don'ts

- Apply ZEONA 840 WDG tank mixtures preferably at planting or immediately after planting not later than three (3) days after planting.
- DO NOT apply post-emergence to soybeans.
- DO NOT use ZEONA 840 WDG on soils with a pH of 7 or
- 10 to 20 mm rain within 7 to 10 days after application is necessary for good results.





- 0-10% Clay use 10g ZEONA 840 WDG + 0.8 & PALLADIUM 960 EC: 11-20% Clay use 15g ZEONA 840 WDG + 0.8 & PALLADIUM 960 EC; 21-30% Clay use 20g ZEONA 840 WDG +1 PALLADIUM 960 EC Apply in 200 l water per hectare (Ground application).
- 0-10% Clay use 10g ZEONA 840 WDG; 11-20% Clay use 15g ZEONA 840 WDG; 21-30% Clay use 20g ZEONA 840 WDG Apply in 30  $\ell$  water per hectare (Arial application).



REGISTRATION DETAILS<sup>†</sup> ZEONA 840 WDG Active ingredient: Diclosulam (triazolopyrimidine sulfonanilide) 840 g/kg Reg. No. L9842, Act 36 of 1947 (caution)

PALLADIUM 960 EC Active ingredient: S-metolachlor (chloroacetamide) 960 g/l Reg. No. L9360, Act 36 of 1947 (harmful)

Registration holder: Villa Crop Protection (Ptv) Ltd. Reg. No. 1992/002474/07 PO Box 10413, Aston Manor, 1630. Tel. (011) 396-2233



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Trade name	Active ingredient	Target species
	picoxystrobin (strobilurin)	Soybean rust
	difenoconozole (triazole)	Soybean rust
	azoxystrobin (strobilurin) + epoxiconazole (triazole)	Soybean rust
	azoxystrobin (strbilurin)	Soybean rust
	prothioconozole (triazole)	Soybean rust

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Click on product links above to get to more information on this product.





## FUNGICIDE

## Active ingredient: Picoxystrobin (strobilurin) 250 g/ $\ell$ (Reg. No. L10034, Act 36 of 1947)

A suspension concentrate, systemic fungicide with contact and translaminar action for the preventative control of soybean rust (*Phakopsora pachyrhizi*) disease in soybeans.







## Features

- ACADEMY 250 SC is a FRAC group code 11 fungicide.
- Inhibits mitochondrial respiration of fungi.
- ACADEMY 250 SC controls soybean rust (*Phakopsora pachyrhizi*) in soybeans.
- Unique redistribution properties showing locally systemic activity at the leaf base as well as acropetal movement to the leaf tips.

**ACADEMY 250 SC** 

- ACADEMY 250 SC is a preferred product for use in combination with other products in a programme, hence forming a vital part in an anti-resistance strategy.
- Research has shown that strobilurins can increase physiological effects, which are beneficial to the crop.

## Do's and don'ts

- DO NOT apply more than 2 (two) sprays per season.
- Apply the first application of the ACADEMY 250 SC tank-mix at the onset of flowering before any disease symptoms are noticed.
- A second application of the ACADEMY 250 SC tank-mix is recommended 3 to 4 weeks later.
- Alternate ACADEMY 250 SC with registered fungicides from different group codes.







## USE RATE<sup>†</sup>

- 300 ml/ha ACADEMY 250 SC + 100 ml/ha SANTANA 480 SC + 50 ml/100l water DIRECT; Apply in 300-500 l water per hectare (Ground application)
- 300 ml/ha ACADEMY 250 SC + 100 ml/ha SANTANA 480 SC + 100 ml/100 l water DIRECT; Apply in 30-40 l water per hectare (Aerial application)



## REGISTRATION DETAILS†

Active ingredient: Picoxystrobin (strobilurin) 250 g/ $\ell$ Reg. No. L10034, Act 36 of 1947 (harmful)

## DIRECT

Active ingredient: Polyetherpolymethylsiloxanecopolymer 300 g/l and vegetable oil 650 g/l Reg. No. L8680, Act 36 of 1947 (caution)

SANTANA 480 SC Active ingredient: Prothioconazole (triazole) 480 g/ $\ell$  Reg. No. L10049, Act 36 of 1947 (harmful)

Registration holder: Villa Crop Protection (Pty) Ltd. Reg. No. 1992/002474/07 PO Box 10413, Aston Manor, 1630. Tel. (011) 396-2233



## PACKAGING

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## **D-ZOLE 250 EC**

Active ingredient: Difenoconazole (triazole) 250 g/ $\ell$  (Reg. No. L7923, Act 36 of 1947)

An emulsifiable concentrate, systemic action fungicide for the preventative control of soybean rust.





## Features

- D-ZOLE 250 EC is a FRAC group code 3 fungicide.
- D-ZOLE 250 EC controls soybean rust (*Phakopsora pachyrhizi*).
- Ideal mixing partner for azoxystobin (MYCOBLOCK 250 SC).
- Low application rate results in less product required for similar efficacy versus other triazoles.

## Do's and don'ts

- Apply at the first signs of disease and repeat 2 to 3 weeks later.
- If the disease appears during flowering or early pod-fill, more than one spray may be necessary.
- Ensure thorough coverage of the whole plant.
- DO NOT apply D-ZOLE 250 EC (or related fungicides) exclusively for prolonged periods throughout the season, to limit the development of resistance.

## FUNGICIDE





## USE RATE<sup>†</sup>

- 325 ml/ha D-ZOLE 250 EC; Apply in 300-500 l water per hectare (Ground application)



## REGISTRATION DETAILS† D-ZOLE 250 EC

Active ingredient: Difenoconazole (triazole) 250 g/ $\ell$  Reg. No. L7923, Act 36 of 1947 (caution)

MYCOBLOCK 250 SC Active ingredient: Azoxystrobin (strobilurin) 250 g/l Reg. No. L8591, Act 36 of 1947 (caution)

Registration holder: Universal Crop Protection (Pty) Ltd. Co. Reg. No. 1983/008184/07 PO. Box 801, Kempton Park, 1620. Tel. (011) 396-2233



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## FUNGICIDE



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## USE RATE<sup>†</sup>

- 600 ml/ha + 50 ml /100 l water Direct;
   Apply in 300-500 l water per hectare (Ground application).
- 600 ml /ha + 100 ml /100 l water Direct; Apply in 30-40 l water per hectare (Arial application).



7 REGISTRATION DETAILS†
INDICATE 250 SC
Active ingredient: Azoxystrobin
(strobilurin) 125 g/l + Epoxiconazole
(triazole) 125 g/l
Reg. No. L9310, Act 36 of 1947
(caution)

Registration holder: Universal Crop Protection (Pty) Ltd. Reg. No. 1983/008184/07 PO Box 801, Kempton Park, 1620. Tel. (011) 396-2233

DIRECT Active ingredient: Polyetherpolymethylsiloxanecopolymer 300 g/l and vegetable oil 650 g/l Reg. No. L8680, Act 36 of 1947 (caution)

Registration holder: Villa Crop Protection (Pty) Ltd. Reg. No. 1992/002474/07 PO Box 10413, Aston Manor, 1630. Tel. (011) 396-2233

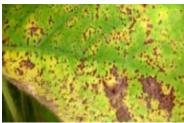


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## **INDICATE 250 SC**

Active ingredient: Azoxystrobin (strobilurin) 125 g/ $\ell$  + Epoxiconazole (triazole) 125 g/ $\ell$  (Reg. No. L9310, Act 36 of 1947)

A suspension concentrate, systemic action fungicide for the preventative control of soybean rust.





## Features

- INDICATE 250 SC is a FRAC group code 3 and 11 fungicide.
- INDICATE 250 SC controls soybean rust (*Phakopsora pachyrhizi*), in soybeans.
- Two modes of action for resistance management.
- INDICATE 250 SC has well documented safety towards beneficial insects (i.e. parasitic wasps, hover flies and honeybees).
- Rapidly taken up by plant.
- Research has shown that strobilurins can increase physiological effects, which are beneficial to the crop.

## Do's and don'ts

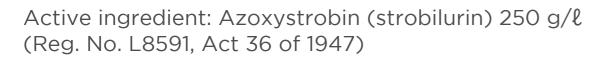
- Apply the first application of INDICATE 250 SC at the onset of flowering before any disease symptoms are noticed.
- A second application of INDICATE 250 SC is recommended in 3 to 4 weeks later.
- Under expected high disease pressure conditions, a 3 weekly spray interval is endorsed.





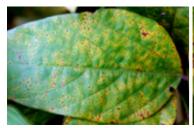


## FUNGICIDE



**MYCOBLOCK 250 SC** 

A suspension concentrate, systemic fungicide with contact and translaminar action for the preventative control of soybean rust (*Phakopsora pachyrhizi*) disease in soybeans.







## Features

- MYCOBLOCK 250 SC is a FRAC group code 11 fungicide.
- Inhibits mitochondrial respiration in fungi.
- MYCOBLOCK 250 SC controls soybean rust (*Phakopsora pachyrhizi*).
- MYCOBLOCK 250 SC has a locally systemic (translaminar) action.
- Effective against germination of spores and early fungal growth, therefore reduces secondary infection.
- Must be used preventively or as early as possible in the disease cycle.
- Little or no effect after fungus has established within the leaf tissue.
- MYCOBLOCK 250 SC is a preferred product for use in combination with other products used in a programme. (eg. triazole - difenoconazole).
- Forms a vital part of an anti-resistance strategy.

## Do's and don'ts

- Apply only in a tank mixture with SANTANA 480 SC plus DIRECT.
- Apply the first application of MYCOBLOCK 250 SC at the onset of flowering before any disease symptoms are noticed.
- A second application of the MYCOBLOCK 250 SC tank-mix is recommended 3 to 4 weeks later.
- Do not apply more than 3 (three) sprays per season, and always alternate with or use in combination with other registered triazoles (difenoconazole).
- Do not mix MYCOBLOCK 250 SC with any heavy metal containing products.





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### USE RATE!

- 300 ml/ha MYCOBLOCK 250 SC + 100 ml/ha SANTANA 480 SC + 50 ml/100 ℓ water DIRECT; Apply in 300-500 ℓ water per hectare (Ground application)
- 300 mℓ/ha MYCOBLOCK 250 SC + 100 mℓ/ha SANTANA 480 SC + 100 mℓ/100 ℓ water DIRECT; Apply in 30-40 ℓ water per hectare (Aerial application)



## REGISTRATION DETAILS†

MYCOBLOCK 250 SC Active ingredient: Azoxystrobin (strobilurin) 250 g/l Reg. No. L8591, Act 36 of 1947 (caution)

### D-ZOLE 250 EC Active ingredient: Difenconazole (triazole) 250 g/l Reg. No. L7923, Act 36 of 1947 (harmful)

Registration holder: Universal Crop Protection (Pty) Ltd. Reg. No. 1983/008184/07 PO Box 801, Kempton Park, 1620. Tel. (011) 396-2233

## DIRECT

Active ingredient: Polyetherpolymethylsiloxane-copolymer 300 g/ $\ell$  and vegetable oil 650 g/ $\ell$  Reg. No. L8680, Act 36 of 1947 (caution)

SANTANA 480 SC Active ingredient: Prothioconazole (triazole) 480 g/ℓ Reg. No. L10049, Act 36 of 1947 (harmful)

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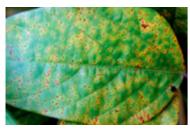




## **SANTANA 480 SC**

Active ingredient: Prothioconazole (triazole) 480 g/l (Reg. No. L10049, Act 36 of 1947)

A suspension concentrate, systemic action fungicide for the preventative control of soybean rust in soybeans.





## **Features**

- SANTANA 480 SC is a FRAC group code 3 fungicide.
- SANTANA 480 SC controls soybean rust (*Phakopsora pachyrhizi*), in soybeans.
- Provides a high level of eradicative and protective control due to fast absorption with long lasting protection.
- Ideal mixing partner for picoxystobin (ACADAMY 250 SC).
- Low application rate results in less product required for similar efficacy compared to other triazoles.

## Do's and don'ts

- Only apply in a tank mixture with ACADEMY 250 SC or MYCOBLOCK 250 SC
- Apply the first application of the SANTANA 480 SC tank-mix at the onset of flowering before any disease symptoms are noticed.
- A second application of the SANTANA 480 SC tank-mix is recommended 3 to 4 weeks later.
- Under expected high disease pressure conditions, a 3-weekly spray interval is recommended.







### USE RATE!

- 100 ml/ha SANTANA 480 SC + 300 ml/ha ACADAMY 250 SC + or 300 ml/ha MYCOBLOCK 250 SC 50 ml/100 l water DIRECT Apply in 300-500 l water per hectare (Ground application).
- 100 ml/ha SANTANA 480 SC + 300 ml/ha ACADAMY 250 SC + 100 ml/100 l water DIRECT; Apply in 30-40 l water per hectare (Aerial application).



## REGISTRATION DETAILS\* SANTANA 480 SC Active ingredient: Prothioconazole (triazole) 480 g/l Reg. No. L10049, Act 36 of 1947 (harmful)

ACADEMY 250 SC Active ingredient: Picoxystrobin (strobilurin) 250 g/l Reg. No. L10034, Act 36 of 1947 (harmful)

## DIRECT

Active ingredient: Polyetherpolymethylsiloxane-copolymer 300 g/ $\ell$  and vegetable oil 650 g/ $\ell$  Reg. No. L8680, Act 36 of 1947 (caution)

Registration holder: Villa Crop Protection (Pty) Ltd. Reg. No. 1992/002474/07 PO Box 10413, Aston Manor, 1630. Tel. (011) 396-2233

MYCOBLOCK 250 SC Active ingredient: Azoxystrobin (strobilurin) 250 g/l Reg. No. L8591, Act 36 of 1947 (harmful)

Registration holder: Universal Crop Protection (Pty) Ltd. Co. Reg. No. 1983/008184/07 PO Box 801, Kempton Park, 1620. Tel. (011) 396-2233



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Trade name	Active ingredient	Target species
	mixed organic buffer system and alcohol ethoxylate surfactant	A pH buffer with wetting and spreading properties for use with alkaline-sensitive agro-chemicals or agro-chemicals that require the use of a buffer.
	ammonium sulphate and non-ionic surfactant	For use with water-sensitive herbicides like glyphosate and products that require the use of a surfactant and/or ammonium sulphate.
	organic acid and alkali	A buffering agent for the correction of the water pH in alkaline spray mixtures.
	polyether-polymethylsiloxane-copolymer and vegetable oil	Direct is a non-ionic adjuvant with spreading and penetrating properties for use with postemergence crop protection product applications, especially fungicides.
	vegetable oils, polyoxy ethylene fatty acid esters	Deposition-agent adjuvant that improves spray deposition and canopy penetration while reducing spray drift and evaporation of spray droplets
	ammonium sulphate	A granular formulation that will slightly reduce alkaline water pH.
	isotridecanol (alkylpolyethylene glycol ether)	A surfactant that increases the wetting and spreading properties of spray solutions.

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Click on product links above to get to more information on this product.





## **AQUABUFF PLUS**

Active ingredient: Mixed organic buffer system and alcohol ethoxylate surfactant 585 g/l (Reg. No. L9210, Act 36 of 1947)

A pH buffer with wetting and spreading properties for use with alkaline-sensitive agro-chemicals or agro-chemicals that require the use of a buffer.

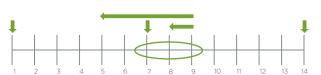
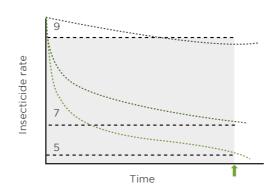


Figure 1: pH-Scale Figure 2: Alkaline hydrolysis



## **Features**

- Used mainly to decrease alkaline hydrolysis (degradation of insecticides in high pH water).
- True buffer that reduces and stabilizes the spray solution pH to between 4 and 6 (typically pH 4.5 - 5.5), where most insecticides are most stable.
- Will not decrease the pH to extremely low levels, especially when using water with a low buffering capacity.
- Contains a surfactant for improved retention and spreading of spray droplets.
- Rate calculation according to water analysis.

## Do's and don'ts

- Add to the spray tank before the alkaline hydrolysis-sensitive
- Do not use as a standard practice, but only when labels specifically recommend acidification.







- 0.04 0.1 % (40 100 ml/100 l spray solution).
- Use the higher rate in water with a high alkalinity (buffering capacity) or when a water analysis indicates it.



## **REGISTRATION DETAILS**† AQUABUFF PLUS

Active ingredient: Mixed organic buffer system and alcohol ethoxylate surfactant

Reg. No. L9210, Act 36 of 1947, (caution)

Registration holder: Villa Crop Protection (Pty) Ltd. Reg. No. 1992/002474/07 PO Box 10413, Aston Manor, 1630. Tel. (011) 396-2233



5 l and 20 l





## ADJUVANT

## Active ingredient: Ammonium sulphate and non-ionic surfactant 480 g/l (Reg No. L10477, Act 36 of 1947)

Class Act NG is an adjuvant that contains ammonium sulphate, a non-ionic surfactant and has humectant properties for use with water-sensitive herbicides like glyphosate and products that require the use of a surfactant and/or ammonium sulphate.



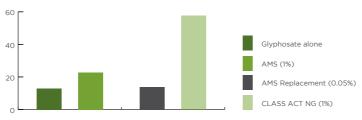


Figure 1: Faster & more effective glyphosate control

Figure 2: Rainfastness of glyphosate

## **Features**

Contains the patented CornSorb Technology.

**CLASS ACT NG** 

- Highly extended droplet drying time.
- Moist droplet deposit increases absorption speed and amount.
- · Contains a full rate of surfactant for droplet spreading and increased absorption.
- Faster control.
- More effective control on hardy weeds.
- Contains ammonium sulphate to negate salt antagonism.
- Registered with leading brand name glyphosate products.

- Use with glyphosate and other salt-sensitive herbicides.



## Do's and don'ts

- Do not use as a standard practice with all herbicides.
- Add to the spray tank before the herbicide.



- 1 2 % (1 2  $\ell$  /100  $\ell$  spray solution).
- For use with glyphosate and other herbicides that recommend the use of ammonium sulphate adjuvants.
- Use the higher rate in cases where additional coverage is required e.g. resilient weeds or weeds with hairy or
- Use the higher rate when spray water contains high levels of calcium, magnesium, sodium and potassium, therefore hard or brackish water.



REGISTRATION DETAILS<sup>†</sup> CLASS ACT NG

Active ingredient: Ammonium sulphate and non-ionic surfactant480g/l Reg. No. L10477, Act 36 of 1947 (caution)

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PACKAGING





## **COMMODOBUFF**

Active ingredient: Organic acid and alkali 660 g/& (Reg No. L5390, Act 36 of 1947)

A buffering agent for the correction of the water pH in alkaline spray mixtures.

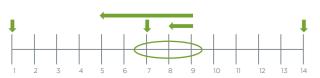
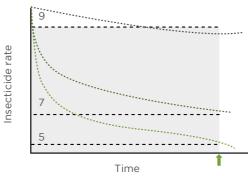


Figure 1: pH-Scale Figure 2: Alkaline hydrolysis

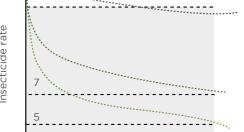


## **Features**

- · Used mainly to decrease alkaline hydrolysis (degradation of insecticides in high pH water).
- True buffer that reduces and stabilizes the spray solution pH to between 4 and 6 (typically pH 4.5 - 5.5), where most insecticides are most stable.
- Will not decrease the pH to extremely low levels, especially when using water with a low buffering capacity.

## Do's and don'ts

- Add to the spray tank before the alkaline hydrolysis-sensitive
- Do not use as a standard practice, but only when labels specifically recommend acidification.





- (50 100 ml/100 l spray solution).
- Use the higher rate in water with a high alkalinity (buffering capacity).



## REGISTRATION DETAILS† COMMODOBUFF Active ingredient: Organic acid and alkali 660 g/l

Reg. No. L5390, Act 36 of 1947 (caution)

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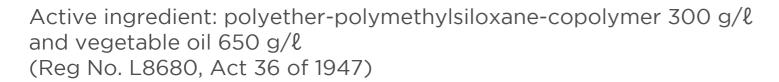
**PACKAGING** 5 ℓ, 20 ℓ







## ADJUVANT



Direct is a non-ionic adjuvant with spreading and penetrating properties for use with postemergence crop protection product applications, especially fungicides.

## **Features**

- Fungicide adjuvant, if label recommended.
- Excellent spreading.

DIRECT

- Assists with the absorption process.
- Also used with clethodim and guizalofop.

## Do's and don'ts

- Normally 0.05 % for ground and 0.1% for aerial fungicide applications.
- Use only if fungicide label specifically recommends an adiuvant.
- Use the higher rate for herbicides.
- Add to the spray tank after the crop protection products.





## USE RATE<sup>†</sup>

- 0.05 0.1 % (50 100 ml /100 l spray solution).
- For use with fungicides.
- For use with selected herbicides (especially -fops and -dims).
- Normally used in conjunction with VELOCITY-DRYMAX with -fops and -dims.



## REGISTRATION DETAILS† DIRECT

Active ingredient: Polyetherpolymethylsiloxane-copolymer 300 g/l and vegetable oil 650 g/l Reg. No. L8680, Act 36 of 1947 (caution)

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PACKAGING 16,56







## **INTERLOCK**

Active ingredient: Vegetable oils, polyoxy ethylene fatty acid esters 880 g/ $\ell$  (Reg No. L10254, Act 36 of 1947)

INTERLOCK is a deposition-agent adjuvant that improves spray deposition and canopy penetration while reducing spray drift and evaporation of spray droplets.

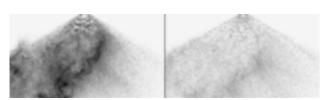


Figure 1: XR nozzle without and with INTERLOCK

# Top Middle Lower 1/3

Figure 2: Depth of canopy penetration with INTERLOCK applied to a canopied crop

## **Features**

- Drastically reduces the ultra and very fine spray droplets.
- Increases mean droplet velocity at canopy height.
- Increases canopy penetration.
- Increases retention and coverage.
- Decreases drift and evaporation.
- · Can be used with herbicides, fungicides and insecticides.
- Does not increase the spray solution viscosity.
- Suitable for both ground and aerial application.

## Do's and don'ts

- Do not use with herbicides that restrict the use of an adjuvant.
- Does not replace other adjuvants because it should be used in conjunction with the recommended adjuvant.
- Do not mix in an induction system or container when the products are undiluted.





## USE RATE<sup>†</sup>

- 0.2 0.3 l/ha Ground and > 0.5 % Aerial rates.
- Compatible with most commonly used crop protection products. However, a jar test is recommended prior to large scale mixing.
- Add after crop protection products or other adjuvants but prior to complete filling of the spray tank.
- Can be used with most Villa crop protection products.



## REGISTRATION DETAILS\*

Active ingredient: Vegetable oils, polyoxy ethylene fatty acid ester 880 g/ $\ell$  Reg. No. L10254, Act 36 of 1947 (caution)

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PACKAGING 10 &





## **VELOCITY-DRYMAX**

Active ingredient: Ammonium sulphate 1000 g/kg (Reg. No. L9454, Act 36 of 1947)

A granular formulation that will slightly reduce alkaline water pH, complex certain antagonistic ions in carrier water and enhance the activity and compatibility of foliar applied herbicides such as glyphosate.



Figure 1: Glyphosate alone and with VELOCITY-DRYMAX

## **Features**

- Overcomes salt antagonism of glyphosate and other salt-sensitive herbicides.
- Overcomes phenoxy herbicide antagonism of glyphosate.
- 100 % concentration dry formulation less transport cost, less storage space.
- Rate calculation according to water analysis or EC.
- Registered with leading glyphosate brand names.
- · Used with clethodim.

## Do's and don'ts

- Add to the spray tank first, before glyphosate or any other sensitive herbicide.
- Pre-solubilize in a small amount of water before adding to the spray tank.
- It is not necessary to also add buffers to glyphosate spray solutions.
- There is no need to let the tank mixture stand for any period of time in order for the VELOCITY-DRYMAX to bind the antagonistic salts. The reaction occurs during droplet drying.



## USE RATE<sup>†</sup>

- 0.25 1 % (0.25 1 kg/100 ℓ spray solution).
- If an EC measurement or water analysis is available, a calculated rate can be recommended.
- For use with glyphosate or any other herbicide that is antagonized by salts in carrier water.



PREGISTRATION DETAILS†
VELOCITY-DRYMAX
Active ingredient: Ammonium sulphate
1000 g/kg
Reg. No. L9454, Act 36 of 1947
(caution)

Registration holder: Villa Crop Protection (Pty) Ltd. Reg. No. 1992/002474/07 PO Box 10413, Aston Manor, 1630. Tel. (011) 396-2233

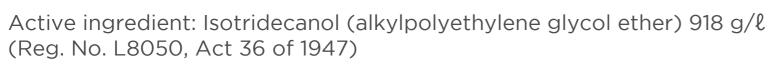


PACKAGING 10 kg





## ADJUVANT



VILLA 51 is a surfactant that increases the wetting and spreading properties of spray droplets and enhances the activity of various crop protection products.

## **Features**

• Standard surfactant in the industry.

VILLA 51

- · Excellent spreading.
- · Helps with the absorption process.
- Wide rate range.
- Registered with leading brand name crop protection products.

## Do's and don't s

- Use with some post-emerge herbicide applications.
- Add to the spray tank after the crop protection products.





## USE RATE

- 0.1 % (100 ml/100 l spray solution).



## REGISTRATION DETAILS†

Active ingredient: Isotridecanol (alkylpolyethylene glycol ether) 918 g/l Reg. No. L8050, Act 36 of 1947 (harmful)

Registration holder: Villa Crop Protection (Pty) Ltd. Reg. No. 1992/002474/07 PO Box 10413, Aston Manor, 1630. Tel. (011) 396-2233



PACKAGING 5 l, 20 l













Trade name	Active ingredient	Target species
	Proprietary blend of phosphate and carbonate salts, sequestering agents, surfactants and solvents.	Spray tank cleaner for commercial use on farm only



Click on product links above to get to more information on this product.





Spray tank cleaner for commercial or farm use only.









## Features

- PROTANK LIQUID CLEANER decreases contamination when changing from one chemical to another.
- Assures accurate dosage by removing chemicals from the previous batch.
- Removes scale, dirt, etc.
- Protects pump and valves.
- Reduces strainer clogging.
- Minimizes nozzle wear.

## Do's and don'ts

- Use a hand boom to wash down the tank interior and cover.
- Once the pump and interior has been cleaned, open boom valve and empty tank by spraying out through boom and nozzles.
- Take care to observe proper disposal of spray solution.
- Rinse tank by following the same procedure using water only.
- A three-minute rinse using cold water is necessary, however if you are changing over to a different chemical, a second rinse will lessen the chance of contamination.
- Use as directed but in addition allow the rinse solution to remain in the sprayer and its parts overnight.

## TANK CLEANER



## °

## USE RATE<sup>†</sup>

## **Large Tanks** (380-1100 ℓ)

Close boom valve and add 190 \( \ell \)
 water to tank, then turn on agitation
 and add 470m\( \ell \) of PROTANK LUQUID
 CLEANER.

## **Smaller tanks**

- Fill tank half full of water and use 25 mℓ or more for every 10 ℓ of tank volume.



REGISTRATION DETAILS†
PROTANK LUQUID CLEANER
Active ingredient: Proprietary blend
of phosphate and carbonate salts,
sequestering agents, surfactants and
solvents.

Registration holder: Villa Crop Protection (Pty) Ltd. Co. Reg. No. 1992/002474/07 PO Box 10413, Aston Manor, 1630. Tel. (011) 396-2233



PACKAGING





