

Meso 480 SC

Reg. No.: L 10449 Act/Wet No. 36 of/van 1947



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

ACTIVE INGREDIENT

Mesotrione (triketone) 480 g/l

GROUP

27

HERBICIDE



WARNING

HAZARD STATEMENTS:

- May be harmful in contact with skin.
- Causes mild skin irritation.
- May cause an allergic skin reaction.
- Very toxic to aquatic life.
- Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS:

- Avoid release to the environment.
- Wear impervious rubber gloves and chemical safety goggles.

Registration holder: **Green Island Investments (Pty) Ltd.**

Co. Reg. No.: 2013/043963/07

P.O. Box 1822, Heidelberg 1438, South Africa

Tel: 078 737 9236

24 HR EMERGENCY NUMBERS

Griffon Poison Information Centre: +27 82 446 8946

24 Hr Transport / Spill emergency no:

(Hazcall24) +27 86 044 4411 (Typhoon Plant Protection)

Distributed by: **Typhoon Plant Protection (Pty) Ltd.**

Co. Reg. No.: 1998/006156/07, C/O Farm Vlakfontein

Corner of the R23 Benoni Road & R550 Nigel Road

Brakpan District, Heidelberg 1438, Gauteng, South Africa

Tel: 078 737 9236

Net Volume:

ℓ

Expiry Date:

Batch No:

Date of Manufacture:

U.N. No. 3082

 **Typhoon**
PLANT PROTECTION



READ LABEL IN DETAIL BEFORE OPENING THE CONTAINER. FOR FULL PARTICULARS, SEE ENCLOSED LEAFLET.
KEEP OUT OF REACH OF CHILDREN AND ANIMALS.

WARNINGS:

Withholding periods: (Minimum number of days between last application, harvest and grazing. DO NOT USE ON SWEETCORN OR POPCORN):

Maize	56 days
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WARNINGS:**HAZARD STATEMENTS:**

- May be harmful in contact with skin.
 - Causes mild skin irritation.
 - May cause an allergic skin reaction.
 - Very toxic to aquatic life.
 - Very toxic to aquatic life with long lasting effects.
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- May irritate the eyes and skin
 - Keep out of reach of children, uninformed persons and animals.
 - Store in a cool, dry place away from food and feed.
 - **Do not use in sweet corn, popcorn or green mealies.**
 - **Re-entry: Do not** enter treated area until spray deposit has dried, unless wearing protective clothing.
 - **Aerial application: PRE-EMERGENCE APPLICATIONS ONLY** - Notify all inhabitants in the immediate vicinity of the area to be sprayed and issue the necessary warnings. **Do not** spray over or allow the drift to contaminate water or adjacent areas.

Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not warrant that it will be effective under all conditions. The activity and effect thereof may be affected by factors such as abnormal climatic and storage conditions, quality of dilution water, incompatibility with other substances not indicated on the label and the occurrence of resistance of the weed against the remedy, as well as by the method, time and accuracy of application. The registration holder furthermore does not accept responsibility for damage to crops, vegetation, the environment or harm to man or animal, or for lack of performance of the remedy concerned due to failure by the user to follow the label instructions, or to the occurrence of conditions which could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

PRECAUTIONS:**PRECAUTIONARY STATEMENTS:**

- Avoid release to the environment.
 - Wear impervious rubber gloves and chemical safety goggles.
 - Collect spillage.
 - Dispose of contents/container in accordance with local regulations
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- **Do not** eat, drink or smoke whilst handling this product.
 - Prevent contamination of food, feeds, drinking water and eating utensils.

Related ingredients:

Substance name (IUPAC)	CAS - No.	Concentration % By weight
	EC - No.	
Mesotrione	104206-82-8	48%
Fatty acid methyl tauride	78330-20-8	1-5%
Ethylene Glycol	107-21-1	1-5%

SYMPTOMS OF HUMAN POISONING:

Acute toxicity to this herbicide is expected to be low and no adverse effects from exposure have been reported. Skin contact, ingestion and inhalation are likely routes of exposure.

FIRST AID TREATMENT:

Inhalation: Remove source of contamination or move patient to fresh air. Keep patient under observation and obtain medical attention if necessary.

Skin contact: If irritation occurs, remove contaminated clothing, shoes and leather goods. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap.
If irritation persists, obtain medical assistance.

Eye contact: Immediately flush the contaminated eyes with gently flowing clean water for 20 minutes, holding the eyelid(s) open until no evidence of chemical remains. If irritation persists, obtain medical assistance.

Ingestion: Have patient rinse mouth thoroughly with water. **Do not induce vomiting.**

In severe cases, obtain medical advice immediately.

For safety when mixing:

- Wear eye protection (face shield). If you get **MESO 480 SC** in your eyes, flush it out immediately with running water for at least 15 minutes.
- Wear rubber gloves. If you get it on your skin, wash it off at once.
- If you get it on your clothes, change and wash them.
- Invert the empty container over the spray or mixing tank and allow to drain for at least 30 seconds after the flow has slowed down to a drip. Thereafter rinse the container three 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.

For safety when spraying:

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

For safety after spraying:

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

RESISTANCE WARNING

For resistance management, **MESO 480 SC** is a **Group code 27 herbicide**. Any weed population may contain individuals naturally resistant to **MESO 480 SC** and other **Group code 27 herbicides**. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly and exclusively in programs. These resistant weeds may not be controlled by **MESO 480 SC** or any other **Group code 27 herbicides**.

To delay herbicide resistance:

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

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

4. USE RESTRICTIONS:

4.1 General

- **Do not use MESO 480 SC** on sweet corn, popcorn and inbred parent lines of maize hybrids or newly released cultivars without first consulting with your chemical supplier or with the seed company concerned.
- **Do not** apply products containing the active ingredients **Flumetsulam** or **Imazethapyr** to soybeans, if maize has been treated with **Mesotrione**-containing products, e.g. **MESO 480 SC** during the previous season on the same field.
- **Do not** apply **MESO 480 SC** through any irrigation system other than a centre pivot system.
- Disturbance of soil after both pre- and/or post-emergence applications can result in re-germination of weeds resulting in reduced weed control.

4.2 Follow-on crops:

The following waiting periods should be adhered to:

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

All rotational crops should be planted only after thorough cultivation. Since the product is metabolised by microbial activity, periods of low microbial activity might extend the residual activity of **MESO 480 SC**.

4.3 Factors affecting weed control:

4.3.1 Pre-emergence application:

- A well prepared seedbed, free of clods and weeds is a requirement for good pre-emergence weed control.
- Prolonged dry soil conditions after a **pre-emergence** application may result in reduced control of germinating weeds.

- **Do not** use **MESO 480 SC** under stress conditions e.g. water logging, severe cold, excessive rain, poor fertilising, low pH, etc.
- Tank mixtures of **MESO 480 SC** with organophosphates e.g. chlorpyrifos should be avoided as damage to crop might occur.
- **MESO 480 SC** should not be applied in cropping systems where flood irrigation is used.

4.3.2 Post-emergence application:

- When applying **MESO 480 SC** post-emergence, make sure that the application is on the true leaves of the weeds – cotyledons are not true leaves.
- Applications should be done on weeds that are actively growing. **MESO 480 SC** is a systemic herbicide, which should be absorbed and translocated to be effective. This is not possible with plants under stress.
- Avoid drift to adjacent crops.
- **Do not** apply through irrigation systems.
- When weeds are stressed due to drought, heat, lack of fertility, flooding or prolonged cool temperatures, control can be reduced or delayed since the weeds are not actively growing. Weed escapes may occur when application is made under prolonged stress conditions. Optimum weed control will be obtained if application of **MESO 480 SC** is delayed until the stress conditions have ended and weeds are once again actively growing. Care should be taken that the target weeds are still within the indicated growth stages at application.
- Temporary crop injury (bleaching) may occur under extreme weather conditions or when the crop is under stress due to inadequate or abnormally high moisture levels or extreme temperatures. Prolonged overcast conditions may also lead to temporary crop bleaching.
- **Do not** apply **MESO 480 SC** within **7 before or 7 days after** an organophosphate (e.g. terbufos) and carbamate insecticide which had been applied as foliar application.
- **Do not** apply **MESO 480 SC** in tank mixture with organophosphate insecticides e.g. chlorpyrifos.

DIRECTIONS FOR USE: USE ONLY AS DIRECTED

5.1 Dilution water:

Use only clean water and buffer with a registered buffer.

5.2 Mixing instructions:

Fill the spray or pre-mix tank with clean water and engage agitator. Agitation must be continued throughout the mixing and spraying operation. Resuspend the spray mixture if agitation was suspended for longer than 5 min. When the spray or premix tank is half full with water, add **MESO 480 SC** slowly and agitate until completely dispersed.

If tank mixed, add **MESO 480 SC** first to the water. Then add all the other suspension concentrates (SC) and only thereafter the emulsifiable concentrates (EC). Lastly add the adjuvant and then continue to fill the tank to the required level with water whilst agitating.

5.3 Ground application:

MESO 480 SC must be applied the same day as mixing.

Apply by means of a tractor mounted boom sprayer which is correctly calibrated with continuous agitation to deliver at least 200 to 300 l spray mixture/ha. Avoid overlapping of spray swaths.

In case of certain **pre-emergence** applications with hydraulic nozzles and **post-emergence** applications with sleeve boom sprayers the water volume can be lowered to 100 l spray volume/ha. However, the use of the registered adjuvants at the correct rates, correct nozzles and nozzle spacing, adequate coverage and nozzle sizes are then very important. The disregard of these factors will lead to poor control of certain weeds.

Flat fan hydraulic nozzles (110°) are recommended for optimum coverage.

In certain cases, sleeve boom sprayers may be used for **post-emergence** applications.

- Sleeve boom sprayers must be correctly calibrated, well maintained and fitted with the correct nozzles.
- The air flow system on a sleeve boom sprayer should work properly and sprays should always cover the target plant fully.
- The use recommendations as on this label should be followed and no changes in rates or product combinations or adjuvants should be done other than indicated in this label.
- Droplet sizes that are prone to drift should be eliminated.

No pre-emergence applications of **MESO 480 SC** should be done with sleeve boom sprayers.

If these precautions are not adhered to the registration holder cannot be held responsible for any non-performance or damages suffered.

Rain or irrigation of 10 to 20 mm is needed after application to leach the chemical into the germinating zone.

If this precipitation does not happen within 14 days of application, reduced efficacy can be expected.

5.4 Aerial application (maize – only pre-emergence applications)

Avoid chemical drift at all times

Aerial application of **MESO 480 SC** may only be done by a registered aerial application operator using a correctly calibrated, registered aircraft according to the instructions of SANS 10118 (Aerial Application of Agricultural Remedies).

It is important to ensure that the spray mixture is distributed evenly over the target area and that the loss of spray material during application is restricted to a minimum. Drift should be avoided at all times. It is therefore essential that the following criteria are met:

Application parameters:

- **Volume:** A volume of 30 litres per hectare is recommended. As **MESO 480 SC** 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:** A droplet coverage of 20 to 30 droplets per cm² must be recovered at the target.
- **Droplet size:** A droplet size spectrum with VMD of 350 to 400 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
- Use suitable **atomising equipment (hydraulic nozzles or rotary atomisers)** that will produce the desired droplet size and coverage, but which will ensure the minimum loss of product either through endodrift (within target field) or exodrift (outside target field). The spraying system must produce a droplet spectrum with the lowest possible Relative Span.

- Position all the atomisers/nozzles within the inner 60 to 75 % of the wingspan to prevent droplets from entering the **wingtip vortices**.
- 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.
- 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.
- 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.

5.6 Centre pivot application (Only pre-emergence in maize)

MESO 480 SC and only thereafter the emulsifiable concentrates (EC) can be applied through a well-operated and well-maintained centre pivot irrigation system.

The centre pivot should apply between 4,5 mm and 7,5 mm of water when applying 265 mℓ **MESO 480 SC** /ha and 2ℓ generic **METOLACHLOR 800 EC**/ha. Control should be for about 56 days where after the follow-on application should be applied by tractor sprayer.

- Calculate the injection rate carefully and make sure it is correct.
- Apply within 2 days of planting.
- Application should be done to fields which are well prepared and with no germinating or established weeds.
- Applications should only be done through centre pivots equipped with an injector system.
- Once **MESO 480 SC** has been applied on the whole of the centre pivot area, it should be set to apply the following water volumes:
 - 10 mm water per ha when clay content < 20%
 - 15 mm water per ha when clay content is 20 - 35%
 - 20 mm water per ha when clay content > 35%
- Keep soil wet for a period of 7-14 days after application.
 - Be aware that the distribution of **MESO 480 SC** and generic **METOLACHLOR 800 EC** will only be as even as the application of the irrigation water.
 - **Do not** apply **MESO 480 SC** and generic **METOLACHLOR 800 EC** through the irrigation water in excessive wind speeds (< 6 ms⁻¹).
- Be careful when the irrigation system overlap at the end of the cycle area as serious over dosage and possible damage could occur.
- Care should be taken when applying chemicals through the centre pivot as breakages or stoppages could lead to major over application of the chemicals.

- Care should be taken not to contaminate boreholes or dams with accidental spillages of chemicals in the irrigation system. Injection of the chemicals close or at the centre is preferable. Both the injector pump and the water pump should be fitted with valves to stop injection as soon as the pivot's forward movement is stopped. The main irrigation water supply line should also be fitted with a non-return valve to prevent treated water to run back into the supply source.

6. CROPS:

6.1. MAIZE:

- The clay content of the soil does not affect the dosage rate of **MESO 480 SC**.
- **MESO 480 SC** can be applied pre- or post-emergence of either the crop or the weeds.
- The pre-emergence application of **MESO 480 SC** must be done on a well-prepared weed-free seedbed to ensure an even distribution.
- If **MESO 480 SC** is applied as indicated, at least 28 - 56 days control of the weeds as listed can be expected.

6.1.1 Pre-Emergence application: **MESO 480 SC** in combination with a generic **METOLACHLOR 800 EC**:

MESO 480 SC 104 mL/ha		Generic Metolachlor 800 EC 325 - 812 mL/ha	
Botanical name	Common name	Botanical name	Common name
<i>Acanthospermum hispidum</i>	Upright starbur	<i>Nicandra physaloides</i>	Apple-of-Peru
<i>Chenopodium album</i>	White goosefoot	<i>Physalis angulata</i>	Wild gooseberry
<i>Echinochloa colona</i>	Marsh grass	<i>Tagetes minuta</i>	Khaki weed

MESO 480 SC 156 mL/ha		Generic Metolachlor 800 EC 487 - 812 mL/ha	
Botanical name	Common name	Botanical name	Common name
Above plus:			
<i>Chenopodium carinatum</i>	Green goosefoot	<i>Eleusine Indica</i>	Goose grass
<i>Setaria pallid-fusca</i>	Red bristle grass	<i>Panicum schinzii</i>	Sweet buffalo grass

MESO 480 SC 208 mL/ha		Generic Metolachlor 800 EC 649 - 812 mL/ha	
Botanical name	Common name	Botanical name	Common name
Above plus:			
<i>Amaranthus hybridus</i>	Common pigweed	<i>Cleome monophylla</i>	Spindlepod
<i>Brachiaria eruciformis</i>	Sweet signal grass	<i>Commelina benghalensis</i>	Benghal wandering Jew
<i>Datura ferox</i>	Large thorn apple	<i>Digitaria sanguinalis</i>	Crab fingergrass
<i>Eragrostis curvula</i>	Weeping love grass	<i>Hibiscus cannabinus</i>	Kenaf
<i>Hibiscus trionum</i>	Bladder weed	<i>Triumfetta pilosa</i>	----
<i>Polygonum aviculare</i>	Postrate knotweed		

MESO 480 SC 260 mL/ha		Generic Metolachlor 800 EC 812 mL/ha	
Botanical name	Common name	Botanical name	Common name
Above plus:			
<i>Urochloa panicoides</i>	Herringbone grass	<i>Xanthium strumarium</i>	Cocklebur

6.1.2 Pre-Emergence application: MESO 480 SC in combination with ACETOCHLOR 700 EC:

(This pre-emergence application should be followed up with a post-emergence application of registered mixtures of **MESO 480 SC, METOLACHLOR 960, or COMBI 600 SC** approximately 5 to 6 weeks later as indicated on these registered labels).

MESO 480 SC plus 156 mL/ha		ACETOCHLOR 700 EC 650 - 1550 mL/ha	
Botanical name	Common name	Botanical name	Common name
<i>Acanthospermum hispidum</i>	Upright starbur	<i>Echinochloa colona</i>	Marsh grass
<i>Bidens pilosa</i>	Black jack	<i>Nicandra physaloides</i>	Apple-of-Peru
<i>Chenopodium album</i>	White goosefoot	<i>Physalis angulata</i>	Wild gooseberry
<i>Chenopodium carinatum</i>	Green goosefoot	<i>Setaria pallid-fusca</i>	Red bristle grass
<i>Crotalaria sphaerocarpa</i>	Mealie Crotalaria	<i>Tagetes minuta</i>	Khaki weed

MESO 480 SC plus 156 mL/ha		ACETOCHLOR 700 EC 850 - 1550 mL/ha	
Botanical name	Common name	Botanical name	Common name
Above plus:			
<i>Citrullus lanatus</i>	Bitter apple	<i>Panicum shinzii</i>	Sweet buffalo grass
<i>Eleusine indica</i>	Goose grass	<i>Tribulus terrestris</i>	Dubbeltjie

MESO 480 SC plus 208 mL/ha		ACETOCHLOR 700 EC 850 - 1550 mL/ha	
Botanical name	Common name	Botanical name	Common name
Above plus:			
<i>Amaranthus hybridus</i>	Cape pigweed	<i>Digitaria sanguinalis</i>	Crab fingergrass
<i>Bidens bipinnata</i>	Spanish black jack	<i>Eragrostis curvula</i>	Weeping love grass
<i>Brachiaria eruciformis</i>	Sweet signal grass	<i>Hibiscus trionum</i>	Bladderweed
<i>Cosmos bipinnatus</i>	Cosmos	<i>Polygonum aviculare</i>	Prostrate knotweed
<i>Datura ferox</i>	Large thorn apple		

MESO 480 SC plus 208 mL/ha		ACETOCHLOR 700 EC 1150 - 1550 mL/ha	
Botanical name	Common name	Botanical name	Common name
Above plus:			
<i>Cleome monophylla</i>	Spindlepod	<i>Hibiscus cannabinus</i>	Kenaf
<i>Commelina benghalensis</i>	Benghal wandering Jew	<i>Truifetta pilosa</i>	----

MESO 480 SC plus 260 mL/ha		ACETOCHLOR 700 EC 1550 mL/ha	
Botanical name	Common name	Botanical name	Common name
Above plus:			
<i>Portulaca oleracea</i>	Purslane	<i>Xanthium strumarium</i>	Cocklebur
<i>Urochloa panicoides</i>	Herringbone grass		
Up to 80% suppression of:			
<i>Cyperus esculentus</i>	Yellow nutsedge	<i>Ipomoea purpurea</i>	Common morning glory

Consult the **ACETOCHLOR 700 EC** label for warnings, precautions and directions for use.

6.1.3 Post-emergence application of MESO 480 SC plus COMBI 600 SC plus an adjuvant.

- **MESO 480 SC** must be applied post-emergence when the target.
 - grasses are in the 2 to 3 leaf stage.
 - broadleaf weeds are in the 2 to 6 leaf stage.
- Recommended adjuvants: In all post-emergence applications of **MESO 480 SC** an adjuvant must be used. The following adjuvants are recommended:
 - **ASTRAND** at 100 mL/100 L spray volume
 - **PERFEK** at 250 mL/100 L spray volume
- To enhance the activity on larger broad leaf weeds, 250 mL **2,4-D Amine 480 SL** can be added to the tank mixtures mentioned below. The addition of **2,4-D** is recommended for the control of morning glory and other problem weeds.
- This post-emergence application should be preceded by a pre-emergence application of **MESO 480 SC**, **METOLACHLOR 800** or **ACETOCHLOR 700 EC** as indicated on the registered labels.

MESO 480 SC plus 156 mL/ha	COMBI 600 SC 280 - 570 mL/ha	plus a recommended adjuvant *
Weeks control	Common name	Common name
4	<i>Datura ferox</i>	Large thorn apple
8	<i>Amaranthus hybridus</i>	Common pigweed
8	<i>Chenopodium album</i>	White goosefoot
8	<i>Chenopodium carinatum</i>	Green goosefoot
8	<i>Cleome monophylla</i>	Spindlepod
8	<i>Hibiscus trionum</i>	Bladder weed
8	<i>Tagetes minuta</i>	Khaki weed
8	<i>Xanthium strumarium</i>	Cocklebur

MESO 480 SC plus 208 mL/ha	COMBI 600 SC 375 - 570 mL/ha	plus a recommended adjuvant *
Weeks control	Common name	Common name
8	<i>Datura ferox</i>	Large thorn apple
8	<i>Ipomoea purpurea</i>	Common morning glory

MESO 480 SC plus 208 ml/ha	COMBI 600 SC 470 - 570 ml/ha	plus a recommended adjuvant *
Weeks control	Common name	Common name
4	<i>Hibiscus cannabinus</i>	Kenaf

MESO 480 SC plus 265 ml/ha	COMBI 600 SC 570 ml/ha	plus a recommended adjuvant *
Weeks control	Common name	Common name
8	<i>Eleusine indica</i>	Goose grass
8	<i>Hibiscus cannabinus</i>	Kenaf

6.1.4 Post-emergence application of MESO 480 SC plus METOLLA 960 plus COMBI 600 SC plus an adjuvant.

- **MESO 480 SC** must be applied post-emergence when the target
 - grasses are between the 2 to 3 leaf stage
 - broadleaf weeds are between the 2 to 6 leaf stage.
- Recommended adjuvants: In all post-emergence applications of **MESO 480 SC** an adjuvant must be used. The following adjuvants are recommended :
- **ASTRAND** at 100 ml/100 l spray volume
- **PERFEK** at 250 ml/100 l spray volume
- To enhance the activity on larger weeds 250 ml **2,4-D** can be added to the tank mixtures mentioned below. The addition of **2,4-D** is recommended for the control of morning glory and other problem weeds.
- This post-emergence application should be preceded by a pre-emergence application of **MESO 480 SC**, **METOLACHLOR 800** or **ACETOCHLOR 700 EC** as indicated on the registered labels.

MESO 480 SC plus 104 ml/ha	plus METOLLA 960 EC 203 - 508 ml/ha	plus COMBI 600 SC 416 ml/ha	plus a recommended adjuvant *
Weeks control	Common name	Common name	
4	<i>Amaranthus hybridus</i>	Common pigweed	
4	<i>Crotalaria sphaerocarpa</i>	Mealie Crotalaria	
4	<i>Cleome monophylla</i>	Spindlepod	
4	<i>Datura ferox</i>	Large thorn apple	
4	<i>Datura stramonium</i>	Thorn apple	
4	<i>Galinsoga parviflora</i>	Gallant soldier	
4	<i>Hibiscus trionum</i>	Bladder weed	
4	<i>Tagetes minuta</i>	Khaki weed	
4	<i>Xanthium strumarium</i>	Cocklebur	

MESO 480 SC 156 ml/ha	plus METOLLA 960 EC 203 - 508 ml/ha	plus COMBI 600 SC 416 ml/ha	plus a recommended adjuvant *
Weeks control	Common name	Common name	
Above plus:			
8	<i>Bidens bipinnata</i>	Spanish blackjack	
8	<i>Bidens pilosa</i>	Blackjack	
8	<i>Datura ferox</i>	Large thorn apple	
8	<i>Galinsoga parviflora</i>	Gallant soldier	
8	<i>Tagetes minuta</i>	Khaki weed	
MESO 480 SC 156 ml/ha	plus METOLLA 960 EC 305 - 508 ml/ha	plus COMBI 600 SC 416 ml/ha	plus a recommended adjuvant *
Weeks control	Common name	Common name	
Above and:			
4	<i>Citrullus lanatus</i>	Bitter apple	
MESO 480 SC 208 ml/ha	plus METOLLA 960 EC 271 - 508 ml/ha	plus COMBI 600 SC 416 ml/ha	plus a recommended adjuvant *
Weeks control	Common name	Common name	
Above and:			
4	<i>Commelina benghalensis</i>	Benghal wandering Jew	
4	<i>Ipomoea purpurea</i>	Common morning glory	
4	<i>Tribulus terrestris</i>	Dubbeltjie	
8	<i>Cleome monophylla</i>	Spindlepod	
8	<i>Hibiscus trionum</i>	Bladder weed	
MESO 480 SC 208 ml/ha	plus METOLLA 960 EC 406 - 508 ml/ha	plus COMBI 600 SC 416 ml/ha	plus a recommended adjuvant *
Weeks control	Common name	Common name	
Above and:			
4	<i>Digitaria sanguinalis</i>	Crab fingergrass	
4	<i>Eleusine indica</i>	Goose grass	
8	<i>Amaranthus hybridus</i>	Common pigweed	
8	<i>Commelina benghalensis</i>	Benghal wandering Jew	
8	<i>Ipomoea purpurea</i>	Common morning glory	
8	<i>Tribulus terrestris</i>	Dubbeltjie	

MESO 480 SC 260 ml/ha	plus METOLLA 960 EC 339 - 508 ml/ha	plus COMBI 600 SC 416 ml/ha	plus a recommended adjuvant *
Weeks control	Common name	Common name	
Above and:			
4	<i>Hibiscus cannabinus</i>	Kenaf	
8	<i>Citrullus lanatus</i>	Bitter apple	
8	<i>Digitaria sanguinalis</i>	Crab fingergrass	
8	<i>Eleusine indica</i>	Goose grass	

MESO 480 SC 260 ml/ha	plus METOLLA 960 EC 508 ml/ha	plus COMBI 600 SC 416 ml/ha	plus a recommended adjuvant *
Weeks control	Common name	Common name	
Above and:			
8	<i>Crotolaria sphaerocarpa</i>	Mealie Crotalaria	
Up to 80% suppression of the following weeds:			
8	<i>Chloris virgata</i>	Feathertop Chloris	
8	<i>Cyperus esculentus</i>	Yellow nutsedge	
8	<i>Hibiscus cannabinus</i>	Kenaf	
8	<i>Urochloa panicoides</i>	Herringbone grass	
8	<i>Xanthium strumarium</i>	Cocklebur	

- Consult the **COMBI 600 SC**, **PERFEK**, and **ASTRAND** labels for warnings, precautions and directions for use.
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