



Avi-Ridge 600

Reg. No. L10905 Act No. 36 of 1947

GROUP C1 + K3 HERBICIDE

A suspension concentrate herbicide for selective pre- and post-emergence control of most annual broadleaf weeds and some annual grasses in grain sorghum and maize and when applied as a directed application in apples, avocados, mangoes, vines, citrus and *Eucalyptus* plantations.

‘n Suspensiekonsentraat onkruidodder vir selektiewe vooropkom- en vroeë na-opkombeheer van die meeste eenjarige breëblaaronkruides asook sommige grasse in graansorghum en mielies en as ‘n gerigte bespuiting in appels, avokados, veselperskes, wingerd, sitrus en *Eucalyptus* plantasies.

Active Ingredients / Aktiewe Bestanddele:

Terbuthylazine (Triazine) / Terbutielasien (Triasien) 497,2 g/ℓ
S-Metolachlor (Chloro-acetanilide) / S-Metolachlor (Chloorasetanilied) ... 102,8 g/ℓ



Registered by / Geregistreer deur:

AVIMA (Pty.) Ltd.

Reg. No. 1961/001744/07

18 Aschenberg Street | Chamdor | Krugersdorp

+27 11 769 1300

Griffon Poison Information Centre: +27 82 446 8946

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LOT NR.:

DATE OF MANUFACTURE:

VERVAARDIGINGSDATUM:

EXPIRY DATE:

VERVALDATUM:

UN NO.:
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Content
Inhoud



IMPORTANT / BELANGRIK:
Read label before use /
Lees etiket voor gebruik



**CAUTION
VERSIGTIG**



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Registered by: AVIMA (Pty) Ltd
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P O Box 3131, Kenmare, 1745

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WARNINGS:

- Handle with care.
- May irritant to eyes and skin.
- Harmful by swallowing.
- Store under lock and key in a cool, dry place, away from food, feeds, seed, and fertilizers.
- Keep out of reach of children, uninformed persons, and animals.
- In case of poisoning, take the patient immediately to a doctor and make this label available to him/her.
- **RE-ENTRY INTERVAL:** Do not enter treated area within 1 day after treatment unless wearing protective clothing.
- **Aerial application:**
- Notify all inhabitants in the immediate vicinity of the area to be sprayed and issue the necessary warnings.
- Do not spray over or allow 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 efficacious under all conditions, because the action and effect thereof may be affected by factors such as abnormal soil, climatic and storage conditions, quality of dilution water, compatibility with other substances not indicated on the label and the occurrence of resistance of the pests against the remedy concerned, as well as the method, time and accuracy of application. The registration holder furthermore does not accept responsibility for damage to crops, vegetation, the environment or harm to man or animal or for lack of performance of the remedy concerned, due to failure of the user to follow the label instructions or to the occurrence of conditions, which could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

PRECAUTIONS:

- Do not inhale the spray mist or fumes.
- Avoid eye and skin contact.
- Wear protective overalls, rubber gloves, gumboots, and face shield when the concentrate is handled and during mixing.
- Wash with soap and water after use and after accidental skin contact.
- Wash contaminated clothing after use.
- Do not eat, drink, or smoke whilst mixing or applying the product or before washing hands and face and change of clothing.
- Avoid drift of spray onto other crops, grazing, rivers, dams, and areas not under treatment or to nearby water sources.
- Do not apply where roots of desirable plants can absorb the chemical.
- Do not mix and load within at least 15 m away, from boreholes, streams, rivers, and dams.
- Do not apply within at least 60 m from dams.
- Ensure that no back siphoning to boreholes or dams takes place, where Atrazine is applied through the irrigation system.
- Clean applicator before using with other products - dispose of wash water where it will not contaminate food, grazing, rivers or dams.
- **TRIPLE RINSE THE EMPTY CONTAINER AS FOLLOWS:** Invert the empty container over the spray or mixing tank and drain for at least 30 seconds after the flow has slowed down to dripping. Thereafter rinse the empty container three times in succession with one quarter of the container volume fresh water and decant the rinsate into the spray or mixing tank.
- Puncture the triple rinsed container and dispose of via an approved collector or recycler (www.croplife.co.za).
- Do not bury, burn, or donate the container to any other parties that may use it as a container for food or beverages.
- Prevent contamination of food, feedstuffs, drinking water, and eating utensils.

RESISTANCE WARNING:

AVI-RIDGE 600 is a group code K3 and C1 Herbicide. Any weed population may contain individuals naturally resistant to **AVI-RIDGE 600** and other group code K3 and C1 Herbicides. The resistant individuals can eventually dominate the weed population if these Herbicides are used repeatedly. These resistant weeds may not be controlled by **AVI-RIDGE 600** or any other group code K3 and C1 Herbicide:

- 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.
- monitor each land on a seasonal basis to identify the development of resistance early.

For specific information on resistance management, contact AVIMA (Pty) Ltd.

USE RESTRICTIONS:

Maize and Sorghum

- To avoid injury to follow-up crops the following waiting periods should be heeded:

All other crops: 24 months

Dry Beans, Forage Sorghum & Groundnuts: 18 months

Potatoes, Small Grains, Soybeans & Sunflowers: 18 months

Grain Sorghum, Maize & Sugarcane: nil

Tree Crops

- Do not apply tank mixtures of **AVI-RIDGE 600** and glyphosate to stone fruit trees.
- Do not apply tank mixtures of **AVI-RIDGE 600** and glyphosate to apples, avocados, citrus, mangoes, and vines within one year after transplanting. Avoid treatment of young interplants in established vineyards and orchards.
- Do not apply tank mixtures of **AVI-RIDGE 600** and glyphosate to apples, avocados, mangoes, citrus and vines suffering from trace element deficiencies, or growing on alkaline or poorly drained soils.

- Tank mixtures of **AVI-RIDGE 600** and glyphosate have a relatively long residual activity in the soil and susceptible crops such as winter cereals, legumes and vegetables should not be planted in soils treated with tank mixtures of **AVI-RIDGE 600** and glyphosate less than 18 months previously.
- Large weeds at the time of application may intercept the herbicide. This will have a detrimental effect on residual control of annual broad-leaved weeds.
- In order to avoid crop injury an appropriate application technique must be chosen which prevents green shoots (winter treatment), green bark (trees younger than 4 years), lower branches and leaves from being sprayed with tank mixtures of **AVI-RIDGE 600** and glyphosate.

Important

- The above-mentioned waiting periods are valid only if the correct dosage rate of **AVI-RIDGE 600** according to soil type was applied and normal or above average rainfall occurred after **AVI-RIDGE 600** application.
- When **AVI-RIDGE 600** is applied to soils which expand on wetting and crack or crumble on drying out, such as turf soils, MIELMIL 600 SC may remain active in the soil for much longer than the above-mentioned waiting periods.
- For this reason, **AVI-RIDGE 600** should not be used on such soils if sensitive crops might be planted in the foreseeable future.

APPLICATION RATES BY CROPS:

MAIZE AND SORGHUM

The following weed species are normally well controlled by **AVI-RIDGE 600** at the dosage rates and conditions as indicated below:

Broadleaf weeds	
<i>Acanthospermum australe</i>	eight-seeded prostrate starbur
<i>Acanthospermum glabratum</i>	five-seeded prostrate starbur
<i>Amaranthus hybridus</i>	common pigweed
<i>Amaranthus thunbergii</i>	red pigweed
<i>Bidens bipinnata</i>	Spanish blackjacket
<i>Bidens pilosa</i>	blackjack
<i>Chenopodium album</i>	white goosefoot
<i>Chenopodium carinatum</i>	green goosefoot
* <i>Commelina benghalensis</i>	Bengal wandering Jew
* <i>Cosmos bipinnatus</i>	cosmos
<i>Crotalaria sphaerocarpa</i>	mealie Crotalaria
* <i>Cucumis myriocarpus</i>	striped wild cucumber
* <i>Datura ferox</i>	large thorn apple
* <i>Datura stramonium</i>	thorn apple
<i>Galinsoga parviflora</i>	gallant soldier
<i>Gisekia pharnaceoides</i>	Gisekia
* <i>Hibiscus cannabinus</i>	kenaf
<i>Hibiscus trionum</i>	bladderweed
* <i>Ipomoea purpurea</i>	common morning glory
<i>Nicandra physaloides</i>	Apple of Peru
<i>Physalis angulata</i>	wild gooseberry
<i>Portulaca oleracea</i>	purslane
<i>Schkuhria pinnata</i>	dwarf marigold
<i>Tagetes minuta</i>	khaki weed
* <i>Tribulus terrestris</i>	dubbeltjie
* <i>Xanthium strumarium</i>	cocklebur
Grasses	
<i>Chloris virgata</i>	feathertop chloris
<i>Eleusine indica</i>	goose grass
<i>Panicum schinzii</i>	sweet buffalo grass
<i>Setaria pallide-fusca</i>	red bristle grass
* These weeds are controlled by post-emergence applications of AVI-RIDGE 600 . Control by pre-emergence applications is variable.	

Reliable control of the above-mentioned grasses is only obtained with pre-emergence applications of **AVI-RIDGE 600**. This also implies reliable control if application is done after an interrow cultivation. The control of sweet buffalo grass (*P. schinzii*) may be erratic.

TREE CROPS

The following weed species are normally controlled by a directed post-emergence application of a tank mixture of **AVI-RIDGE 600** and glyphosate at the dosage rates recommended below:

Broadleaf weeds	
<i>Acanthospermum australe</i>	eight-seeded prostrate starbur
<i>Amaranthus hybridus</i>	common pigweed
<i>Anagallis arvensis</i>	pimpernel
<i>Arctotheca calendula</i>	Cape marigold
<i>Bidens bipinnata</i>	Spanish blackjacket
<i>Bidens pilosa</i>	blackjack
<i>Chenopodium album</i>	white goosefoot
<i>Conyza sumatrensis</i>	tall fleabane
<i>Echium lycopsis</i>	Patterson's curse
<i>Erodium moschatum</i>	musk heron's bill
<i>Galinsoga parviflora</i>	gallant soldier
<i>Hypochoeris radicata</i>	hairy wild lettuce
<i>Ipomoea purpurea</i>	common morning glory
<i>Lactuca serriola</i>	wild lettuce
<i>Medicago polymorpha</i>	burclover
<i>Oenothera spp.</i>	primrose
<i>Picris echioides</i>	bristly ox-tongue
<i>Plantago lanceolata</i>	narrow-leaved ribwort
<i>Raphanus raphanistrum</i>	wild radish
<i>Senecio consanguineus</i>	wild radish
<i>Sonchus oleraceus</i>	sowthistle
<i>Tagetes minuta</i>	khaki weed
<i>Triumfetta sp.</i>	klitsbossie
Grasses	
<i>Bromus diandrus</i>	ripgrut brome
<i>Bromus unioloides</i>	rescue grass
<i>Digitaria sanguinalis</i>	crab finger-grass
<i>Eleusine indica</i>	goose grass
<i>Lolium spp.</i>	ryegrass
<i>Panicum maximum</i>	common buffalo grass
<i>Paspalum dilatatum</i>	common Paspalum
<i>Poa annua</i>	winter grass

Hard-to-kill perennial grasses and perennial broad-leaved weeds may only be initially suppressed. Where ring or strip weeding is practised, a tank mixture of **AVI-RIDGE 600** and glyphosate does not prevent the treated area from being re-invaded by creeping weeds which are rooting outside the treated area.

The following broadleaf weeds are normally well controlled residually after an initial post-emergence application of tank mixture of **AVI-RIDGE 600** and glyphosate.

<i>Acanthospermum australe</i>	eight-seeded prostrate starbur
<i>Acanthospermum glabratum</i>	five-seeded prostrate starbur
<i>Amaranthus hybridus</i>	common pigweed
<i>Amaranthus thunbergii</i>	red pigweed
<i>Bidens bipinnata</i>	Spanish blackjacket
<i>Bidens pilosa</i>	blackjack
<i>Chenopodium album</i>	white goosefoot
<i>Chenopodium carinatum</i>	green goosefoot
<i>Galinsoga parviflora</i>	gallant soldier
<i>Gisekia pharnacioides</i>	Gisekia
<i>Hibiscus trionum</i>	bladderweed
<i>Nicandra physaloides</i>	Apple of Peru
<i>Physalis angulata</i>	wild gooseberry
<i>Portulaca oleracea</i>	purslane
<i>Schkuhria pinnata</i>	dwarf marigold
<i>Tagetes minuta</i>	khaki weed

DIRECTIONS FOR USE: Use only as indicated.

Compatibility:

The compatibility of **AVI-RIDGE 600** with other products may be influenced by the formulation of the products involved as well as the quality of the water. Since the formulation of other products may change without the knowledge of Registration Holder and the quality of water may vary from farm to farm, a physical compatibility test should always be carried out prior to application.

AVI-RIDGE 600 is compatible with Atrazine and is compatible with glyphosate and paraquat if use a compatibility agent.

Mixing instructions:

- Shake well before use. Replace cap after pouring.
- Half-fill the spray tank with water and pour the required quantity of **AVI-RIDGE 600** or **AVI-RIDGE 600** and Atrazine 500G/L SC into the spray-tank while stirring. Ensure thorough agitation during filling and spraying operations. Tank mixtures must be sprayed out immediately and not allowed to stand in the spray tank.

Application techniques:

1. Pre-emergence:

AVI-RIDGE 600 may be applied on soils at or immediately after planting on a fine, even, and firm seedbed, thoroughly cultivated immediately prior to planting, to ensure a weed free seedbed. Rainfall shortly after application is necessary to activate the herbicide. Thus, if after application dry conditions prevail for a period of 7 – 14 days weeds may emerge and develop. In such cases a shallow cultivation, e.g., with a rotary cultivator, must be carried out to destroy these weeds.

2. Post-emergence:

AVI-RIDGE 600 may also be applied post-emergence before the broadleaf weeds have developed beyond the 4-leaf stage. A grass killer should be applied pre-emergence to control the grass weeds. Where grasses were not controlled or broadleaf weeds have developed beyond the 4-leaf stage, these weeds must first be destroyed by a cultivation and **AVI-RIDGE 600** then applied onto clear soil.

Apply tank mixtures of **AVI-RIDGE 600** and glyphosate post directed on actively growing weeds which are not under moisture or temperature stress. Rain or irrigation a few days prior to application will improve the control. Do not apply tank mixtures of **AVI-RIDGE 600** and glyphosate when the target weeds are wet or covered by a thick layer of dust. Always use clean water. Avoid the use of brackish or muddy water, or water with a high clay and/or silt content.

3. Ground application

AVI-RIDGE 600 may be applied with any medium or high volume sprayer equipped with an efficient agitation mechanism and which is capable of adequate coverage and even distribution. Best results are obtained using flat fan-type spray nozzles and applying a minimum spray volume of 200 l/ha water. Tank mixtures of **AVI-RIDGE 600** and glyphosate may also be applied with a knapsack sprayer.

4. Aerial application

Aerial application of this product 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. It is therefore essential that the following criteria are met:

1. Application parameters:
 - **Volume:** A volume of 30 l/ha (pre-emergence) and 35 l/ha (post-emergence) is recommended. As this product has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy or be held responsible for any adverse effects if the product is applied aurally at a lower volume rate than recommended above.
 - **Droplet coverage:** A droplet coverage of 20 - 30 droplets per cm² (pre-emergence) and 30 – 45 droplets per cm² (postemergence) must be recovered at the target.
 - **Droplet size:** A droplet spectrum with a VMD of 350 – 400 microns (pre-emergence) and 300 – 350 microns (postemergence) is recommended. Ensure that the production of fine droplets (less than 150 microns - high drift & evaporation potential) is restricted to a minimum.
 - **Flying height:** The height of the spray boom should be maintained at 3 – 4 metres above the target. Do not spray

when aircraft is in a climb, at the top or during a dive, or when banking.

2. Equipment:
 - 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 operator must use a setup that will produce a droplet spectrum with the lowest possible relative span. All nozzles / atomisers should be positioned within the inner 60% to 75% of the wingspan to prevent droplets from entering the wingtip vortices.
3. Meteorological conditions:
 - The difference in temperature between the wet and dry bulb thermometers, of a whirling hygrometer, should not exceed 8°C. The addition of a suitable anti-evaporant is recommended if the VMD of the droplets is less than 200 - 250 microns. Stop spraying if the wind speed exceeds 15 km/h.
 - Aerial application of this product must not be done under turbulent, unstable conditions during the heat of the day when rising thermals and downdraughts occur. Also note that the application of this product under temperature inversion conditions (spraying in or above the inversion layer) 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 the movement of the suspended spray cloud away from the target field.

It is essential to obtain an assurance from the aerial spray operator that the above requirements are met.

APPLICATION RATES:

Important

All dosage rates recommended below are for overall application. In the case of band application calculate the appropriate quantities to be used according to the band and row widths.

1. GRAIN SORGHUM

1.1. Pre-emergence

AVI-RIDGE 600 can be used pre-emergence in grain sorghum provided the sorghum seed has been thoroughly treated as prescribed with Fluxofenim 960G/L EC.

TABLE 1: Pre-emergence application rates of **AVI-RIDGE 600** in grain sorghum:

Soil type	% Clay	AVI-RIDGE 600 (l/ha)
Sand / sandy loam	0 – 20	NOT RECOMMENDED
Sandy clay loam	21 – 30	3
Sandy clay loam / sandy clay	31 – 35	3.7
Heavier soils including turf	> 35	NOT RECOMMENDED

1.2. Post-emergence

AVI-RIDGE 600 may be used post-emergence in sorghum. However, the crop should at least have reached the 5-leaf stage before application.

TABLE 2: Post-emergence application rates of **AVI-RIDGE 600** in grain sorghum:

Soil type	% Clay	AVI-RIDGE 600 (l/ha)
Sand / sandy loam	0 – 15	NOT RECOMMENDED
Sandy clay loam	16 – 20	2.6
Sandy clay loam / sandy clay	21 – 30	3
Heavier soils including turf	> 30	3

Important

- Wetter must be added to the **AVI-RIDGE 600** spray mixture.
- The above-mentioned treatments will not provide adequate control of grass weeds.

2. MAIZE (Pre-emergence)
2.1. AVI-RIDGE 600 only

TABLE 3: Pre-emergence application rates of **AVI-RIDGE 600** in maize:

Soil type	% Clay	AVI-RIDGE 600 (ℓ/ha)
Sand	0 – 10	2.2
Loamy Sand / sandy loam	11 – 20	2.6
Sandy clay loam	21 – 30	3
Heavier soils including turf	> 30	NOT RECOMMENDED

2.2. AVI-RIDGE 600 with Atrazine 500G/L SC

AVI-RIDGE 600 may not always control *Cleome monophylla* adequately and may sometimes not give adequate late season control of mealie-Crotalaria (*C. sphaerocarpa*). In the event of a heavy infestation of these weeds it is advisable to use **AVI-RIDGE 600** plus Atrazine 500G/L SC in a tank mixture.

TABLE 4: Application rates of **AVI-RIDGE 600** plus Atrazine 500G/L SC in maize:

Soil type	% Clay	AVI-RIDGE 600 (ℓ/ha)
Sand	0 – 10	1.2
Loamy Sand / sandy loam	11 – 20	1.4
Sandy clay loam	21 – 30	1.5
Sandy clay/turf	31-40	1.9

3. CROP ROTATION

The above mentioned quantities of **AVI-RIDGE 600** recommended in Tables 1 to 4 may damage triazine sensitive follow-up crops such as groundnuts, dry beans, soya beans, sunflowers, wheat, vegetables, cotton, and tobacco. Where these crops are to be planted as follow-up crops the application rate of **AVI-RIDGE 600** should not exceed 2,1 ℓ/ha. On soils with 0 - 10% clay in the North West Province and North Western Free State and high lime content soils, the lower rates of **AVI-RIDGE 600** may still damage follow-up crops. These low rates may result in poorer broadleaf control and shorter residual effect especially on soils with more than 20 % clay. Post-emergence control of broadleaf weeds is recommended when crop rotation with sensitive crops is practised.

4. TREE CROPS AS LISTED ON THE MAIN PANEL

TABLE 5: Application rates of a tank mixture of **AVI-RIDGE 600** and glyphosate:

Soil type	AVI-RIDGE 600 (ℓ/ha)	Glyphosate 360G/L SL (ℓ/ha)
Winter rainfall area Initial post-emergence control of winter weeds or Germinated summer weeds	3.5 – 4.2 2.8	2.5 – 3 2
Summer rainfall area Control of weeds as listed. Use higher rate for larger weeds	2.8 – 4.2	2 – 3

Remarks

- Allow 14 days between pruning and application.
- Use the higher application rate when grasses and difficult to control dicots, e.g., *P. echinoides*, *E. moschatum* and *M. polymorpha* are the predominant weeds.
- Use the higher application rate where the weed size exceeds 30 cm.
- Use the lower dosage rate of the tank mixture of **AVI-RIDGE 600** and glyphosate on young plantations (1 to 2 years) grown on sandy soils (< 10 % clay).
- Slashing weeds taller than 30 cm prior to the application of a tank mixture of **AVI-RIDGE 600** and glyphosate will result in improved control, provided they have been allowed to re-grow to the recommended stage for treatment.
- Use a separate contact or systemic herbicide for controlling spots/patches of perennial weeds.

- Poor residual control of shallow germinating weeds, i.e., *T. minuta* can be expected when an application of the tank mixture of **AVI-RIDGE 600** and glyphosate on soils with low organic matter and/or clay content is followed by heavy rain or irrigation shortly after application.
- Temporary yellowing of the lower leaves of *Eucalyptus* trees can be expected when heavy rains follow an application of a tank mixture of **AVI-RIDGE 600** and glyphosate. This will, however, have no negative effect on the trees and the trees will quickly outgrow these symptoms.
- Tank mixtures of **AVI-RIDGE 600** and glyphosate should preferably be used during the phase of active vegetative weed growth.
- Degree of control and duration of effect depends on weed species, weed size, growing conditions at, and following the period of application, rainfall, and soil organic matter content.
- A tank mixture of **AVI-RIDGE 600** and glyphosate rapidly stops growth of susceptible weeds. Visual symptoms will, however, only be noticeable 3 – 5 days after application. Weed control will take place 10 – 14 days after application depending on growing conditions and weed susceptibility.