



RANGEFINDER GG

Reg. No. /Nr L 9736, Act/Wet No. /Nr 36 Of Van 1947
N-AR 1656

GROUP C1 + C2 HERBICIDE

READ THE LABEL BEFORE USE
KEEP OUT OF REACH OF CHILDREN AND ANIMALS

A soil applied granular herbicide for the control of certain tree and shrub species as listed.

'n Grondtoegediende korrel onkruiddoder vir die beheer van sekere boom-en bosspesies soos aangedui.



WARNING

Hazard Statements

Causes skin irritation
Causes serious eye irritation
Toxic to aquatic life with long lasting effects

Precautionary Statements

IF ON SKIN - Wash with plenty of water
IF IN EYES - Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
If skin irritation occurs - Get medical help.
If eye irritation persists get medical help.

Active ingredients/Aktiewe bestanddele

100 g/kg Bromacil (Substituted uracil) / 100 g/kg Bromasil(Gesubstitueerde urasil)

100 g/kg Tebuthiuron (Urea compound) / 100 g/kg Tebutiuron (Urea verbinding)

Net volume 1 l Netto volume

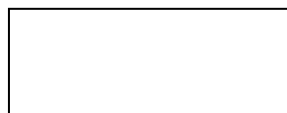
REGISTRATION HOLDER / REGISTRASIEHOUER:

Agritech Bioscience (Pty) Ltd / (Edms) Bpk t/a Carabiner
Reg. No. 2008/004392/07
PO Box / Posbus 1224
Isando
1600
South Africa / Suid-Afrika

Batch No.



Date of Manufacture
Expiry date (2 years)



..... Lot Nr.

..... Datum van Vervaardiging
..... (2 jr) Vervaldatum



UN No. 3077

In case of poisoning, call the following number:

Poison centre (Unitas hospital): Emergency Number: 012 664 1100
TYGERBERG: Emergency Number: 021 931 6129
RED CROSS: Emergency Number: 021 689 5227
RAPID SPILL RESPONSE: Emergency Number: 0800 775 3305
GRIFFON POISON CENTRE: Emergency Number: 082 446 8946

WARNINGS

- GHS Hazard statements

Causes skin irritation
Causes serious eye irritation
Very toxic to aquatic life
Toxic to aquatic life with long lasting effects

- Handle with care.
- Harmful if swallowed. In case of poisoning, call a doctor and show this label to him.
- May irritate the nose, skin, throat, and eyes.
- Store under a lock and key in a cool, well-ventilated place away from food, feed, seed, and fertilizers.
- Keep out of reach of children, animals, and uninformed people.
- Harmful to fish and aquatic organisms.
- Avoid eye and skin contact as well as contact with clothing.
- May cause eye and skin irritation.
- Do not contaminate any area other than the target area with **RANGEFINDER GG**.
- **Re-entry:** Do not enter the treated area within 1 day unless wearing protective clothing.

DISCLAIMER

Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not warrant that it will be effective under all conditions. The activity and effect thereof may be affected by factors such as abnormal soil, climatic and storage conditions, quality of dilution water, compatibility with other substances not indicated on the label and the occurrence of resistance of the weed against the remedy, as well as by the method, time, and accuracy of application. The registration holder furthermore does not accept responsibility for damage to crops, vegetation, the environment or harm to man or animal, or for lack of performance of the herbicide 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

- GHS Precautionary statements

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read carefully and follow all instruction.
Wash hands thoroughly after handling. Do not touch eyes.
Avoid release to the environment.
Wear eye protection/face/hand protection.
IF ON SKIN - Wash with plenty of water.
IF IN EYES - Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
Specific treatment (see First aid on this label).
Rinse mouth.
If skin irritation occurs - Get medical help.
If eye irritation persists, get medical help.
Take off contaminated clothing and wash it before reuse.

Collect spillage.

Dispose of contents/container in accordance with local / regional / national / international regulations.

- Do not inhale dust.
- Avoid contact with skin, eyes, and clothes.
- Wear protective clothing (e.g., face shield, rubber gloves and boots) while handling the granules.
- In the case of contamination, flush immediately with water.
- Wash with soap and water directly after use or skin contact.
- Do not smoke, eat, drink, or use the toilet whilst handling this product or before washing hands and face with soap and water and changing clothes.
- Prevent contamination of food, feed, drinking water as well as eating utensils.
- Wash contaminated clothing daily.
- Do not apply where the roots of any desirable plants may absorb the product.
- Do not apply where the run-off from the treated area will contaminate water or within at least 20 meters of permanent water.
- Do not load within 20 meters of any water body.
- Do not mix, clean, or load the application equipment within 20 meters of a well or fountain unless on an impervious pad in order to prevent groundwater contamination.
- Avoid drift onto other crops, grazing, rivers, dams, or other areas not under treatment.
- Clean all equipment thoroughly following use and dispose of the wash water where it will not pollute the environment. Empty containers should be disposed of in an approved manner.
- All application equipment must be thoroughly cleaned and any residues from the cleaning must not come into contact with any non-target areas.
- Do not use the empty container for any other purpose.
- Destroy the empty container by perforation and flattening and burning after use of the product
- In order to avoid injury to any desirable plants, the spray equipment used must be thoroughly washed and rinsed in the following way: Thoroughly rinse the applicator and flush with clean water. Loosen and physically remove any visible deposits. Flush the entire system thoroughly with clean water. Thoroughly clean all other associated application equipment. Dispose of the wash water responsibly in order to prevent contamination of the environment and water sources.
- The residual action of **RANGEFINDER GG** in the treated area may be impaired if fire occurs within 36 months of application.

RELEVANT SUBSTANCES

Chemical name	Concentration of hazardous ingredient in composition	CAS No.	Globally Harmonised System, EU (GHS) and according to regulation EC No 1272/2008 [CLP]
Tebuthiuron	≥ 10%	34014-18-1	Acute Tox. Oral 4 Aquatic Acute 1 Aquatic Chronic 1
Bromacil	≥ 10%	314-40-9	Acute Tox. 4 Skin Irrit. 2 Eye Irrit. 2 STOT SE 3 Aquatic Acute 1; M-Factor - Aquatic Acute: 10

FIRST AID

Provide medical personnel with the container label, product name or safety data sheet (SDS) when seeking medical attention.

General Information: Remove patient from exposed area. Never give fluids or induce vomiting if patient is unconscious or is having convulsions.

- **Signs and symptoms of poisoning:** Unknown. No cases of human poisoning have been reported.
- **Ingestion: Seek medical attention.** Never give anything by mouth to a victim who is unconscious or is having convulsions. Emesis (vomiting) may be indicated in substantial recent ingestions if advised to do so from a medical practitioner. Contraindications include **Signs of oral, pharyngeal, or esophageal irritation; a depressed gag reflex; or central nervous system excitation or depression. If these symptoms are present or are likely, DO NOT INDUCE EMESIS.** Emesis is most effective if it is initiated within 30 minutes of ingestion.
- **Inhalation:** Remove victim to fresh air. Keep patient calm. Monitor for respiratory distress. If cough or difficulty in breathing develops, evaluate for respiratory tract irritation, bronchitis, or pneumonitis. Apply oxygen or artificial respiration if necessary. Keep the patient warm and at rest. Treat symptomatically. Consult a physician after significant exposure.
- **Eye contact:** Flush eyes with plenty of clean, room temperature water for at least 15 minutes holding eyelids open. Remove contact lenses. Call a doctor for treatment advice. Obtain medical attention immediately if irritation persists. If irritation, pain, swelling, lacrimation, or photophobia persists after 15 minutes of irrigation, an ophthalmologic examination must be performed.
- **Skin contact:** Immediately remove contaminated clothing and flush body and clothes with large amounts of water. Wash thoroughly with soap and water (including hair, skin, and fingernails) Wash contaminated clothing before re-use. Seek medical assistance if irritation persists. Persons providing first aid must wear gloves to avoid self-contamination.

Carefully observe patients with inhalation exposure for the development of any signs or symptoms and administer symptomatic treatment as needed. Administer 100% humidified supplemental oxygen with assisted ventilation as needed. Exposed eyes and skin should copiously be flushed with clean water. There are no specific antidotes for poisoning by these herbicides. Particularly in the case of suicidal ingestions, the possibility must always be kept in mind that multiple toxic substances may have been ingested. If large amounts of this herbicide have been ingested, and if the patient is fully alert, induce emesis with Syrup of Ipecac, followed by several glasses of water. For adults and for children over 12 years: 30 mL. For children under 12 years: 15 mL. When the vomiting has stopped, administer activated charcoal. Add sorbitol to the charcoal slurry unless diarrhea has already commenced. If the patient is not fully alert, place a cuffed endotracheal tube to protect the airway, then aspirate and lavage the stomach with an activated charcoal slurry. Leave a quantity of charcoal, with sorbitol, in the stomach before withdrawing the stomach tube. Repeated administration of the activated charcoal at half or more of the initial dosage every 2-4 hours may be beneficial. If a small amount of this herbicide has been ingested, if effective emesis has already occurred, or if treatment is delayed: administer the activated charcoal and sorbitol by mouth. If serious dehydration and electrolyte depletion had occurred as a result of vomiting and diarrhea, monitor the blood electrolytes and fluid balance, and administer intravenous infusions of glucose, normal saline, Ringer's-lactate in order to restore the extracellular fluid and electrolytes. Follow-up with oral nutrients as soon as fluids can be retained. Fluids lend support in the excretion of the toxicants. Supportive measures are normally sufficient for successive management of excessive exposures to tebuthiuron. If the patient's condition deteriorates despite good supportive care, then the operation of an alternative or additional toxicant should be suspected.

NOTICE TO USER

This agricultural remedy is to be used only in accordance with the instructions on this label. It is an offence under the Act to use this product in a manner contrary with the directions on the label.

USE RESTRICTIONS

- **RANGEFINDER GG** should not be used in areas near trees or other desirable plants, or where their roots are present as **RANGEFINDER GG** may leach into the root zone of these plants and cause severe injury or death of these plants.
- Do not apply to any crop or situation not mentioned in this label.
- Do not apply this product in combination or tank mixture with any other product or agricultural remedy which is not specifically listed on this label. Agritech Bioscience (Pty) Ltd. accepts no responsibility for any negative effects experienced if the instructions on this label are not adhered to, unless an Agritech Bioscience representative was consulted beforehand.
- Do not apply on or within 50 meters of desirable plants or trees (e.g. windbreaks, ornamental trees and shrubs along roads) or on areas where their roots may extend, or where the product may be washed or moved into contact with their roots as these plants may be killed or severely damaged.
- Do not use on soils where susceptible crops are to be grown within 5 years.
- Over-application, or any use not in accordance with the directions on this label may cause adverse effects.

RESISTANCE WARNING STATEMENT

For resistance management, **RANGEFINDER GG** is a group code C1 + C2 herbicide. Any weed population may contain individuals naturally resistant to **RANGEFINDER GG** and other Group Code C1 + C2 herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds may not be controlled by **RANGEFINDER GG** or any other Group Code C1 + C2 herbicide.

To delay herbicide resistance

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

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

The presence of resistant weeds is difficult to detect prior to use and therefore neither the Registration Holder nor the Distributor can accept responsibility for any losses as a result of **RANGEFINDER GG** not controlling resistant weeds. Do not apply **RANGEFINDER GG** alone in situations where weed resistance has been confirmed. Sub-standard application of **RANGEFINDER GG** will lead to inferior weed control and may assist in the development of herbicide resistance. It is of the utmost importance to inspect treated areas at regular intervals in order to identify the occurrence of herbicide-resistant weeds timeously.

MODE OF ACTION

RANGEFINDER GG is a systemic soil herbicide, absorbed mainly by the roots with slight absorption through the leaves and stems. It is a photosynthetic electron transport inhibitor at the photosystem II receptor site.

DIRECTIONS FOR USE - Use only as directed.

A. TREES AND SHRUBS

- Read all the instructions carefully before application. **RANGEFINDER GG** is a herbicide with a long residual action. The degree of the control and the duration of the effects will depend on the dosage rate, rainfall, and soil type.
- **RANGEFINDER GG** treatments will only become effective once sufficient rainfall has occurred to leach the chemical into the root zone where it can be taken up by the target plant. It is therefore recommended to apply **RANGEFINDER GG** just before, or at the beginning of the rainy season in order to obtain the best results. Do not apply towards the end of the rainy season.
- **RANGEFINDER GG** is slow acting and susceptible species may take up to 24 months to die completely, depending on the soil texture, species, and effective rainfall. During this period the treated plants should show repeated defoliation and re-growth, with progressive dieback until death occurs. Therefore, a second application is not recommended within 24 months or until the symptoms of defoliation no longer occur.
- **Under high rainfall conditions, leaching of this product may occur which may result in product loss and reduced efficacy. RANGEFINDER GG may cause injury to grasses in the treated area, but these should recover and proliferate as the tree and shrub competition is removed and the product leaches deeper into the soil. Heavy rainfall may increase lateral movement of the product in the soil and thus area of grasses affected.**

METHOD OF APPLICATION

Hand application:

- Weigh out the recommended quantity of **RANGEFINDER GG** and distribute it evenly over the drop zone of the target plant. The treatment must be applied to the area where the feeder roots are located.
- **A minimum of 1 m² per 2 m plant height must be treated.**
- **Do not apply onto the stem of the plant or on grass and / or dead leaves at the base of the stem – apply directly onto the soil at a recommended distance of 15 – 30 cm from the base of the stem.**
- When more than one dose is applied, these must be positioned evenly around the base of the stem.

Aerial application:

Ensure that the equipment is correctly calibrated and is checked regularly during application to ensure even and accurate application.

Aerial application of **RANGEFINDER GG** may only be carried out by fixed wing aircraft fitted with specially designed application apparatus. For more information, contact your supplier or the registration holder.

The application rates vary according to species and clay content of the soil (refer to the tables below), as well as the area where situated.

IMPORTANT

Do not apply **RANGEFINDER GG** during rainy conditions, or when the wind speed exceeds 20 km/h. A minimum flying height of 20 metres above the canopy of the target plants must be maintained.

The swath width depends on the type of spreader used.

The target area must be correctly marked out and the markers used must be clearly visible to the operator.

RECOMMENDATIONS

The recommended application rates below are for soils with a clay content of 10-40%.

Consult your supplier regarding applications on very shallow and gravelly soils. For soils containing less than 10% clay, consult your supplier.

Table 1: Trees and shrubs

Weed species	Common name	Dosage of RANGEFINDER GG	Number of doses (2 g) according to tree height	
			Seedlings (up to 0.5 m tall)	Established trees (taller than 0.5 m)
<i>Acacia erubescens</i>	Blue Thorn	3.75 kg / ha	1*	Apply one additional dose for every 0.5 m increase in tree height. Do not exceed 8 doses per tree where trees are growing in relatively close proximity (less than 2 – 3 m apart)
<i>Acacia karoo</i>	Sweet Thorn			
<i>Acacia mellifera</i>	Black Thorn			
<i>Acacia nigrescens</i>	Knob Thorn			
<i>Acacia nilotica</i>	Scented Thorn			
<i>Acacia tortilis</i>	Umbrella Thorn			
* <i>Colophospermum mopane</i>	Mopane			
<i>Dichrostachys cinerea</i>	Sickle bush			
<i>Terminalia prunioides</i>	Purple pod terminalia			
** <i>Grewia bicolour</i>	White raisin			
<i>Grewia flava</i>	Brandy bush			
*** <i>Terminalia sericea</i>	Silver cluster leaf			

- Multi-stemmed seedlings up to 0.5 m may need 2 dosages in order to obtain adequate control.
 - * Variable results on sandy soils.
 - ** Multi-stemmed plants need one dose per main stem of 20 mm or more.
 - *** Not recommended on soils with less than 10% clay.

NOTES

- Multi-stemmed trees require a higher application rate than single-stemmed trees. For multi-stemmed trees apply up to double the number of doses that would be required for a single-stemmed tree of a similar height.
- Solitary large trees may need a higher dosage than those growing in close proximity. In this case apply up to double the number of recommended doses.
- Trees coppicing after cutting or due to injury caused by fire do not display their original (true) height. Consult your supplier for advice in such cases.
- Depending on weather conditions, the accuracy and thoroughness of the application, etc., follow-up applications may be needed after 24 months, or once defoliation symptoms no longer occur.

RANGEFINDER GG controls the above-mentioned weed species in the tank mixes as indicated. Other weed species that were not present in the development trials of this product may also be controlled to a certain degree. The registration holder accepts no responsibility for unlisted weeds.