

RANGEFINDER

Reg. No. / Nr L9929 Act No. 36 of 1947 / Wet Nr 36 van 1947
N-AR 1787, W 130939

GROUP

5

HERBICIDE

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

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

**'n Grondtoegediende suspensie konsentraat
onkruidodder vir die beheer van sekere
boom-en bosspesies soos aangedui.**

Active Ingredients / Aktiewe Bestanddele

Bromacil	contains 250 g a.i. per l	Bromasil
(Substituted Uracil)		(Gesubstitueerde Urasil)
Tebuthiuron	contains 250 g a.i. per l	Tebutiuron
(Urea compound)		(Urea verbinding)



WARNING

Hazard Statements

Harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
Very toxic to aquatic life.
Toxic to aquatic life with long lasting effects.

Precautionary Statements

IF SWALLOWED: Get medical help.
IF ON SKIN: Wash with plenty of water and soap.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.



REGISTRATION HOLDER / REGISTRASIEHOUER:

Agritech Bioscience (Pty) Ltd / (Edms) Bpk t/a Carabiner
Reg. No. 2008/004392/07
6 Antwerp Street, Apex, Benoni,
1540
South Africa / Suid-Afrika



Batch No./Date manufactured/Expiry date: Refer to details printed on container

UN No. / VN Nr. 3082

Net volume L Netto Volume

In case of poisoning, call the following numbers:

Poisons Information Helpline: +27 861 555 777

EMERGENCY NUMBER: +27 82 446 8946

WARNINGS

- GHS Hazard statements

Harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
Very toxic to aquatic life.
Toxic to aquatic life with long lasting effects.

- **Store at a temperature not exceeding 32 °C.**
- **RE-ENTRY:** Do not enter the treated area within 1 day unless wearing protective clothing.

DISCLAIMER

Although this remedy has been 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 weeds against the remedy concerned as well as by the method, time and accuracy of application. The registration holder furthermore does not accept responsibility for damage to crops, vegetation, the environment, or harm to man, or animal, or for lack of performance of the remedy concerned, due to 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 instructions.
Avoid breathing dust/fumes/gas/mist/vapours/spray.
Wash hands thoroughly after handling. Do not touch eyes.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.
IF SWALLOWED: Get medical help.
IF ON SKIN: Wash with plenty of water and soap.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
Get medical help if you feel unwell.
Specific treatment (see first aid on this label).
Rinse mouth.
If skin irritation or a rash occurs - Get medical help.
If eye irritation persists get medical help.
Take off contaminated clothing and wash it before reuse.
Collect spillage.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with national regulations.

- OPERATOR PROTECTION

- Handle with care.
- Do not inhale the spray mist or fumes.
- Wash with soap and water directly after use or accidental skin contact as well as contact with contaminated clothing.

- Wear protective clothing (e.g., face shield, rubber gloves and boots) while handling the concentrate and when preparing and applying the spray mixture.
 - Should eye contact occur, flush the eyes with plenty of clean water for 15 minutes holding eyelids open. Remove contact lenses after 1-2 minutes of irrigation. **Seek medical attention.**
 - Do not smoke, eat, drink, or use the toilet whilst handling this product or before washing hands and face with soap and water.
 - Prevent contamination of food, feed, drinking water as well as eating utensils.
 - Wash contaminated clothing after use.
- ENVIRONMENTAL PROTECTION
 - Prevent spray drift onto other non-target vegetation, crops, grazing, rivers, dams, or areas not under treatment.
 - 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 10 meters of permanent water.
 - Do not mix or load within 20 meters of any water body.
 - Do not mix, clean, or load the spraying equipment within 20 meters of a well or fountain unless on an impervious pad in order to prevent groundwater contamination. Prevent ground water contamination through back-siphoning when filling the spray tank by means of an anti-siphoning device or an air break between the water hose and the spray tank contents.
- STORAGE AND DISPOSAL
 - Store under a lock and key in a cool place away from food, feed, seed, fertilizers or other agricultural remedies.
 - Store away from food, feed, fertilizer, and seed.
 - **KEEP OUT OF SIGHT AND REACH OF CHILDREN**, uninformed persons, untrained personnel, unauthorised personnel and animals.
 - Containers and packages must be completely emptied before disposal.
 - **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. Destroy the triple rinsed container by perforation and flattening and do not use for any other purpose. Store appropriately until it can be disposed of via an approved collector or recycler authorised to recycle or destroy waste in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) and the relevant waste management regulations. Empty containers and product should not be burnt. Do not bury, burn or donate the container to any other parties that may use it as a container for food or beverages.
 - In order to avoid injury to any desirable plants, the spray equipment used must be thoroughly washed and rinsed in the following way: The spray equipment must be drained immediately following application. Thoroughly rinse the sprayer and flush the hoses, boom, and nozzles with clean water. Loosen and physically remove any visible deposits. Remove and clean the nozzles, screens, and strainers. 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.
 - **DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE.**

RELEVANT SUBSTANCES

Hazardous Ingredients	Concentration (w/v)
Bromacil	≥ 22%

Tebuthiuron	≥ 22%
Monoethylene Glycol	≥ 4% - <5.5%

FIRST AID TREATMENT

If medical advice is needed, have product container or label at hand. Provide medical personnel with the container, label 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.

Inhalation: Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). **Seek medical attention.**

Skin contact: Immediately remove contaminated clothing and flush body and clothes with large amounts of water. Wash thoroughly with soap and clean running water (including hair, skin and fingernails) for at least 15 minutes. Wash contaminated clothing before re-use. Persons providing first aid must wear gloves to avoid self-contamination. **Seek medical attention.**

Eye contact: Flush eyes immediately with plenty of clean, room temperature water for at least 15 minutes holding eyelids open. Remove contact lenses, if present, after the first 1-2 minutes, then continue rinsing eyes. **Seek medical attention.**

Ingestion: Rinse mouth immediately with clean water and have the patient sip a glass of water if the patient is alert and able. Do NOT induce vomiting unless instructed to do so by a medical professional. Never induce vomiting or give anything by mouth to a victim who is unconscious or is having convulsions. **Seek medical attention.**

Treat symptomatically and supportively.

RESISTANCE WARNING STATEMENT

For resistance management, **RANGEFINDER** is a group code 5 herbicide. Any weed population may contain individuals naturally resistant to **RANGEFINDER** and other group code 5 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** or any other group code 5 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. Large numbers of healthy surviving weeds can be an indication that resistance is developing. Efforts should be taken to prevent seed set of these survivors.
- Integrate other control methods (such as chemical, cultural, biological) into weed control programmes.
- Refer to the Herbicide Resistance Action Committee for information regarding any applicable resistance management of group 5 herbicides at <https://hracglobal.com/> for more information.
- Avoid distribution of the resistant species to adjacent fields by implements during the cultivation period.

As the occurrence of resistance cannot be forecast, users are advised to keep all treated crops under close observation. If the treatment is not effective following the use of **RANGEFINDER** as

recommended, a resistant strain may be present. If a resistant strain is positively identified, consideration should be given to the prompt use of a herbicide with a different mode of action against which no record of resistance exists.

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** not controlling resistant weeds. Do not apply **RANGEFINDER** alone in situations where weed resistance has been confirmed. Sub-standard application of **RANGEFINDER** 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 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.

NOTICE TO USER: This agricultural remedy is to be used only in accordance with the instructions on the label. It is an offence under Act No. 36 of 1947 to use this agricultural remedy for any purpose in a manner contrary to the directions on the label.

TREES AND SHRUBS

Read all the instructions carefully before application. **RANGEFINDER** 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 diluted for use is non-corrosive, non-volatile and non-flammable.

RANGEFINDER 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** 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 is slow acting and susceptible species may take up to 24 months to die, 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 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.

USE RESTRICTIONS

- **RANGEFINDER** should not be used in areas near trees or other desirable plants, or where their roots are present as **RANGEFINDER** 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 t/a Carabiner accepts no responsibility for any negative effects experienced if the instructions on this label are not adhered to, unless a Carabiner 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.
- By buying this product, the buyer undertakes that the user is fully aware of and suitably trained on the hazards associated with the preparation and use of this product. By selecting this product voluntarily, the user assumes responsibility for his or her own personal protection whilst storing, mixing, and applying the product in the approved manner according to the instructions for use. The user also confirms to have consulted the SDS of this product and he/she is aware of the potential health hazards which could arise out of use and misuse of this product. Users are encouraged to keep records of all procedures followed and which personal protection equipment was used at all times. All personal protection equipment used must be kept clean and in good working order according to the manufacturer's specifications. Agritech Bioscience (Pty) Ltd t/a Carabiner accepts no responsibility for any adverse effects whatsoever resulting from improper use of this product or the use of unsuitable personal protection equipment. The user has selected to use this product at his/her own free will and risk.
- **Do not use RANGEFINDER if the above-mentioned use restrictions cannot be adhered to.**

MIXING INSTRUCTIONS

The mixture to be used is dependent on the species to be treated. Refer to the recommendations below in order to determine the mixture to be used.

This product must be mixed as follows:

Empty the entire quantity of **RANGEFINDER** to be prepared into a suitable container. Add a small quantity of clean water and stir thoroughly into a smooth cream. Thereafter, add the rest of the clean water while stirring constantly until a lump-free suspension is obtained. Agitate the mixture thoroughly and then pour into the applicator tank and shake the tank frequently while the application is in progress in order to keep the mixture in suspension.

GENERAL INFORMATION

- 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.

APPLICATION INSTRUCTIONS

- The use of an automatic vaccinator or similar applicator is recommended.

- Applicators with a reasonable squirting distance (1 – 2 metres) greatly facilitate ease of application in areas densely populated with the target species.
- The applicator should be calibrated to deliver 2 mℓ per single dose.
- Using the mixtures indicated below, as determined by the species and soil type, apply one or more doses to the soil at the base of the target plant.
- **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.

APPLICATION RATES

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

SPECIES	MIXTURE OF RANGEFINDER AND WATER	NUMBER OF DOSES (2 mℓ) ACCORDING TO TREE HEIGHT	
		SEEDLINGS (up to 0.5 m tall)	ESTABLISHED TREES (taller than 0.5 m)
Black Thorn (<i>Senegalia mellifera</i>)	1.5 ℓ + 8.5 ℓ water	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)
Blue Thorn (<i>Senegalia erubescens</i>)			
Brandy bush (<i>Grewia flava</i>)			
Knob Thorn (<i>Senegalia nigrescens</i>)			
Mopane* (<i>Colophospermum mopane</i>)			
Purple pod terminalia (<i>Terminalia prunioides</i>)			
Scented Thorn (<i>Vachellia nilotica</i>)			
Sickle bush (<i>Dichrostachys cinerea</i>)			
Silver cluster leaf*** (<i>Terminalia sericea</i>)			
Sweet Thorn (<i>Vachellia karroo</i>)			
Umbrella Thorn (<i>Vachellia tortilis</i>)			
White raisin** (<i>Grewia bicolor</i>)			

- 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.

RANGEFINDER 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.