

RAVEN

Reg. No. / Nr L11908 Act No. 36 of 1947 / Wet Nr 36 van 1947

GROUP 4 HERBICIDE

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

A systemic water soluble herbicide for the control of woody plants as listed for forestry, grass pastures, conservation, and industrial areas. 'n Sistemiese water oplosbare onkruidodder vir die beheer van houtagtige plante soos aangetoon in bosbou, grasweidings, bewarings en nywerheidsgebiede.

Active Ingredient / Aktiewe Bestanddeel

Triclopyr (Pyridyloxy compound)contains 360 g a.i. per lTriklopir (Piridiloksieverbinding)
(as triethylamine salt) (as trietielamiensout)



WARNING

Hazard Statements

Flammable liquid and vapour.
Causes serious eye irritation.
May cause damage to organs through prolonged or repeated exposure.
Very toxic to aquatic life with long lasting effects.

Precautionary Statements

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical help.



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. 1993

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

Flammable liquid and vapour.
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Very toxic to aquatic life with long lasting effects.

- Poisonous by swallowing, inhalation, or absorption through the skin.
- May cause irritation to skin.
- May cause severe irritation to eyes and irreversible eye damage.
- Remove all sources of ignition from the storage area.
- Concentrate may cause eye and skin irritation.
- **FLAMMABLE** – Do not store or open container near open flames or naked lights.
- **RE-ENTRY:** Do not enter treated area within 1 day following application unless wearing protective clothing.
- **In case of poisoning immediately call a physician and make this label available to him/her.**

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.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Ground and bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take action to prevent static discharges.
Do not breathe dust/fumes/gas/mist/vapours/spray.
Wash hands thoroughly after handling. Do not touch eyes.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
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.

If eye irritation persists: Get medical help.

In case of fire - Use Carbon dioxide, dry chemical, foam, water fog or halon extinguishing agents to extinguish.

Collect spillage.

Store in a well-ventilated place. Keep cool.

Dispose of contents/container in accordance with national regulations.

- OPERATOR PROTECTION

- Handle with care.
- Avoid skin and eye contact by wearing protective clothing when preparing and applying the product.
- Wear protective gloves and eye protection when handling the concentrate, and when preparing and applying the spray mixture.
- Do not inhale fumes or spray mist.
- Wash with soap and water after use and accidental skin contact as well as contact with contaminated clothing.
- 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 or irrigation. **Seek medical attention.**
- Wash contaminated clothing after use.
- Do not eat, drink, or smoke while mixing or applying the product or before washing hands and face and changing clothes.

- ENVIRONMENTAL PROTECTION

- Prevent spray drift onto other non-target vegetation, crops, grazing, rivers, dams, or areas not under treatment.
- Do not contaminate dams, rivers, lakes, or any other water sources.
- Clean the applicator directly after use. Dispose of the rinsate where it will not contaminate crops, grazing, rivers, dams, and boreholes.

- STORAGE AND DISPOSAL

- Store under lock and key in the original tightly closed container in a cool, dry, well-ventilated place out of direct sunlight.
- Store away from food, feed, fertilizer, and seed.
- **KEEP OUT OF SIGHT AND REACH OF CHILDREN**, uninformed persons, untrained personnel, unauthorised personnel and animals.
- Do not allow access to this product by children, uninformed persons, untrained personnel, unauthorised personnel, or animals under any circumstances.
- Prevent contamination of food, feeds, drinking water and eating utensils.
- This applicator should not be used for applying chemicals other than herbicides.
- 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.
- **DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE.**

RELEVANT SUBSTANCES

Hazardous Ingredients	Concentration (w/v)
Triclopyr triethylamine salt	>40.0%
Ethylene glycol	>1-<10%
Ethanol	>1-<10%
EDTA	>1-<10%

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. This product contains a Pyridinecarboxylic acid herbicide and solvent.

Inhalation: Move the patient to fresh air and keep them warm and at rest. If the patient is not breathing, call an emergency responder or ambulance, then apply artificial respiration. If mouth-to-mouth resuscitation is used, use rescuer protection (pocket mask etc.). **Seek medical attention.**

Skin contact: Contaminated clothing and shoes should immediately be removed, and the body, clothes and shoes should be flushed with large amounts of water. Wash thoroughly with plenty of water. 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 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.**

No specific antidote. Treat symptomatically and supportively. If large amounts have been ingested, and if lavage is performed, endotracheal and/or oesophageal control is suggested. The dangers of lung aspiration must be weighed against the toxicity when considering emptying the stomach. For further information on the treatment of poisoning refer to the product Safety Data Sheet provided.

RESISTANCE MANAGEMENT WARNING STATEMENT

For resistance management, **RAVEN** is a group code 4 herbicide. Any weed population may contain individuals naturally resistant to **RAVEN** and other group code 4 herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds may not be controlled by **RAVEN** or any other group code 4 herbicide.

To delay herbicide resistance:

- Avoid the 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 4 herbicides at <https://hracglobal.com/> for more information.
- Avoid distribution of the resistant species to adjacent field by implements during the cultivation period.

As the occurrence of resistance cannot be forecast, users are advised to keep all treated weeds under close observation. If the treatment is not effective following the use of **RAVEN** 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 **RAVEN** not controlling resistant weeds. Do not apply **RAVEN** alone in situations where weed resistance has been confirmed. Sub-standard application of **RAVEN** or other pyridyloxy herbicides will lead to inferior weed control and may assist in development of herbicide resistance.

Ensure that the person assigned to apply the product is properly trained in its use.

MODE OF ACTION

RAVEN is a selective systemic herbicide, rapidly absorbed by the foliage and roots and then translocated throughout the plant. **RAVEN** accumulates in the meristematic tissue where it induces auxin-type responses.

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 any manner contrary to the directions on the label.

COMPATIBILITY

The compatibility of **RAVEN** with other products depends on the formulations of the respective products as well as the quality of the spray water to be used. As formulations change from time to time it is recommended that a physical compatibility test be done prior to the tank mixture being made. **RAVEN** is compatible with the adjuvants Actipron Super (L5506) and Methos (L11114). All **WARNINGS**, **PRECAUTIONS**, **USE RESTRICTIONS** and **DIRECTIONS FOR USE** on the product labels must be fully adhered to. Consult the relevant labels for full details. **RAVEN** should not be mixed with products other than those specifically listed in this label.

USE RESTRICTIONS

- Do not apply **RAVEN** to any situation not mentioned in this instruction leaflet.
- Only apply **RAVEN** using an accurate and safe application technique.
- Do not allow spray drift to contact susceptible broadleaf crops, fruit, or ornamentals.
- Target plants must be actively growing irrespective of the method of application.

- Certain target species may re-grow from the rootstocks (such as *Solanum elaeagnifolium*). In case of regrowth, apply as a spot treatment onto actively growing re-growth, and ensure that all leaves and stems are thoroughly wetted to just before the point of run-off.
- Apply strictly in accordance with the application directions.
- Do not contaminate any water body.
- If **RAVEN** is used in a tank mixture with other recommended products, consideration should be given to the restrictions of those respective products.
- 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.
- 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 experienced if the instructions on this label are not adhered to or 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 RAVEN if the above-mentioned use restrictions cannot be adhered to.**

MIXING INSTRUCTIONS

Half-fill the spray tank with suitable water. While filling the spray tank add required amount of **RAVEN** to the water in the tank while agitating. Fill the spray tank to the desired volume with water. Just before the tank is full, add the adjuvant according to the recommended rate on the respective product's label. Agitate well to ensure mixing prior to the application of the mixture. Do not use brackish water. Should tank mixtures with other products be made, follow the respective manufacturer's label recommendations. Ensure thorough agitation of the mixture in the tank during mixing and application.

Tank mixtures must be sprayed out immediately and not allowed to stand in the spray tank overnight. Spraying equipment must be thoroughly flushed out at the end of the spraying operation as described above. Ensure that spray premixes and/or final spray mixtures are kept out of reach of children, uninformed persons, untrained personnel, unauthorised personnel and animals.

APPLICATION INSTRUCTIONS

Ensure that the equipment is correctly calibrated and is checked regularly during application to ensure even and accurate application. Knapsack sprayers, tractor mounted boom sprayers or similar suitable applicators which are fitted with solid cone nozzles and can distribute the spray mixture evenly over the target may be used. A spray volume of 300-500 l/ha should be used to ensure thorough coverage of target plants. Use nozzles such TG1 or equivalent to ensure good coverage. **Constant agitation throughout the spray operation is essential.** Only clean water should be used. Do not, under any circumstances allow spray or drift to contact any part of desirable vegetation otherwise severe injury or destruction may result.

Warning:

If topkill is obtained but regrowth occurs from the crown, apply Trimax E (L7666) or Radiate (L9569) as a foliar spray.

- In the case of trees having multiple stems, treat each stem separately.
- Check for adequate sap flow and bleeding.

FOLIAR APPLICATION

- Apply to actively growing plants with full leaf cover.
- Do not spray whilst weeds are wet, dormant, under stress or covered in a layer of dust or silt or when damaged by frost.
- Rain on sprayed plants may result in reduced efficacy if occurring within 1 hour of application or before spray deposit has dried.
- Apply as full cover spray (to point of run-off) at approximately 2 bar pressure, using TG1, Delavan CE1 or equivalent nozzle. Always thoroughly wet all leaves and stems.

CUT STUMP APPLICATION

- Apply preferably immediately after felling but definitely within 3 hours.
- **RAVEN** should not be applied to the stump if surface is wet from rain or dew.
- Apply as a coarse spray using solid cone nozzle tips (e.g., Spraying Systems TG-1, Delavan CE 1, or equivalent type) at 100 kPa, low pressure.
- Do not exceed spray height of 20 cm above target. Do not apply if wind velocity exceeds 15 km/h (as measured by handheld wind recorder). The difference between the wet and dry bulb readings on a whirling hygrometer must not exceed 8 °C.
- Apply according to directions in the table below.

FRILL APPLICATION

Using an axe, make horizontal, downward angled cuts through the bark to penetrate but not go deeper than into the sapwood. Immediately apply spray mixture into every cut, taking care that it is not wasted on the bark. Cuts should be connected and made around the entire circumference of the trunk as close to the soil surface as possible. Re-treat as necessary.

APPLICATION RATES

TABLE 1: WEED CONTROL BY FOLIAR APPLICATIONS

Actipron Super or Methos should be added at a rate of 500 ml/100 l final spray mix (0.5% mixture).

WEED SPECIES	DOSAGE RATE/100 l WATER	REMARKS
Bugweed (<i>Solanum mauritianum</i>)	600 ml	Apply a full cover spray to actively growing seedlings up to 1.0 m high and apply sufficient mixture to ensure thorough wetting of leaves and stems. Established plants should be slashed and the regrowth treated at approximately 50 cm height with sufficient mixture to ensure thorough wetting.
Saligna gum (<i>Eucalyptus grandis</i>)	1.25 l	Young plants up to 1.0 m high should be treated with a full cover spray in sufficient mixture to ensure thorough wetting of leaves and stems.
Sickle bush (<i>Dichrostachys cinerea</i>)	500 ml	Young plants up to 1.0 m high should be treated with a full cover spray in sufficient mixture to ensure thorough wetting of leaves and stems.

Sweet thorn (<i>Vachellia karroo</i>)		
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TABLE 2: WEED CONTROL BY CUT STUMP APPLICATIONS

Actipron Super or Methos should be added at a rate of 50 mL/10 l final spray mix (0.5% mixture).

WEED SPECIES	DOSAGE RATE/100 ℓ WATER	REMARKS
Black wattle (<i>Acacia mearnsii</i>)	3.0 ℓ (3% mixture)	Apply to low cut stumps (10 – 20 cm high) preferably with a single cut surface.
Blackwood (<i>Acacia melanoxylon</i>)	6.0 ℓ (6% mixture)	
Bugweed (<i>Solanum mauritianum</i>)	3.0 ℓ (3% mixture)	Apply to complete cut surface of stumps with a diameter of less than 10 cm. Where multiple stumps are present, all cut surfaces must be treated.
Camden woollybutt gum (<i>Eucalyptus macarthurii</i>)	10.0 ℓ (10% mixture)	
Grey poplar (<i>Populus canescens</i>)	6.0 ℓ (6% mixture)	For bigger stumps, apply to the cambial region (sapwood) of the cut surface. In all cases, apply until the point of run-off.
Karri gum (<i>Eucalyptus diversicolor</i>)	3.0 ℓ (3% mixture)	
Mesquite (<i>Prosopis sp.</i>)	5.0 ℓ (5% mixture)	In the event of some regrowth and depending on the species, a follow-up spray as a coppice application with either Trimax E (L7666) or Mafia (L9724) may be required.
Paraffin weed (<i>Chromolaena odorata</i>)	2.0 ℓ (2% mixture)	
Port Jackson (<i>Acacia saligna</i>)	3.0 ℓ (3% mixture)	
Saligna gum (<i>Eucalyptus grandis</i>)		
Sickle bush (<i>Dichrostachys cinerea</i>)		
Silver wattle (<i>Acacia dealbata</i>)		
Spider gum (<i>Eucalyptus lehmannii</i>)	6.0 ℓ (6% mixture)	
Sugar gum (<i>Eucalyptus cladocalyx</i>)	10.0 ℓ (10% mixture)	
Sweet thorn (<i>Vachellia karroo</i>)	3.0 ℓ (3% mixture)	
Syringa (<i>Melia azedarach</i>)		

TABLE 3: WEED CONTROL BY FRILL APPLICATIONS

Actipron Super or Methos should be added at a rate of 50 mL/10 l final spray mix (0.5% mixture)

WEED SPECIES	DOSAGE RATE/10 l WATER	REMARKS
Black wattle (<i>Acacia mearnsii</i>)	400 mL (4% mixture)	See APPLICATION INSTRUCTIONS above.

Saligna gum (<i>Eucalyptus grandis</i>)	350 mℓ (3.5% mixture)	Apply sufficient mixture to fill the frill without unnecessary wastage down the bark. Stem diameter of <i>Acacia mearnsii</i> should not exceed 10 cm. (Bigger diameters will result in poorer control).
Spider gum (<i>Eucalyptus lehmannii</i>)	600 mℓ (6% mixture)	
Syringa (<i>Melia azedarach</i>)	300 mℓ (3% mixture)	

The registration holder is not responsible for weeds not listed.

ACKNOWLEDGEMENT OF TRADEMARKS

Actipron Super (L5506)
Mafia (L9724)
Methos (L11114)
Radiate (L9569)
Trimax E (L7666)

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