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# BROMOTRIL® P 500 SC

Reg. no. L7019 Act/Wet 36 of/van 1947
N-AR 0785; W130709

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

| GROUP | 6/24 | HERBICIDE |
|---|---|---|

| | |
|---|---|
| A selective suspension concentrate contact herbicide for the post-emergence control of certain broadleaf weeds in wheat, barley, oats, maize, grain sorghum and established lucerne. | 'n Selektiewe suspensiekonsentraat kontak-onkruiddoder vir die naopkomsbeheer van sekere breëblaaronkruide in koring, gars, hawer, mielies, graansorghum en gevestigde lusern. |

**DANGER**

**Hazard statements**
Toxic if swallowed.
May cause allergic skin reaction.
Fatal if inhaled.
Suspected of damaging the unborn child.
Very toxic to aquatic life with long lasting effects.

**Precautionary statements**
Avoid release to the environment.
Wear protective gloves, protective clothing, and eye and face protection.

**ACTIVE INGREDIENT/AKTIEWE BESTANDDEEL**

bromoxynil (nitrile)…….. 500 g/L …..…….... bromoksiniel (nitriel)
as the free phenolic form as die vry fenoliese vorm

**NET VOLUME/NETTO VOLUME**

…… L

**REGISTRATION HOLDER/REGISTRASIEHOUER**
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**IN CASE OF POISONING, CALL THE FOLLOWING NUMBERS**:
Griffon Poison Information Centre:
+27 82 446 8946 or
Tygerberg Poison Information Centre:
+27 861 555 777
**EMERGENCY NUMBER:**
SPILL TECH: +27 86 100 6366 or +27 83 253 6618

UN no.: 2902

| | | |
|---|---|---|
| Batch number | ..... | Lotnommer |
| Date of manufacture | ..... | Datum van vervaardiging |
| Expiry date | ……. | Vervaldatum |

***GHS information***

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**WARNINGS**

- Toxic if swallowed.
- May cause allergic skin reaction.
- Fatal if inhaled.
- Suspected of damaging the unborn child.
- Very toxic to aquatic life with long lasting effects.

Allow a withholding period of 40 days between last application and harvest, grazing or feeding.

- Re-entry: Do not enter treated field within 1 day after application unless wearing protective clothing.
- Handle with care.
- Could be moderately irritating to eyes.
- Store away from food, feed, drinking water and other agricultural chemicals.
- In case of poisoning contact a physician and show this label to him.
- **Aerial application:** Notify all persons in the immediate vicinity of the area to be sprayed and issue the necessary warnings. Do no spray over water or adjacent areas and prevent spray drift to contaminate these 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 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 failure of the user to follow 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**

- If medical advice is needed, have product label or container at hand.
- Keep out of reach of children.
- Obtain, read, and follow all safety instructions before use.
- Do not breathe fumes/mist/vapours or spray.
- Wash hands and face thoroughly after handling.
- Do not eat, drink, or smoke when using this product.
- Use only outdoors or in a well-ventilated area.
- Contaminated work clothing should not be allowed out of the workplace.
- Avoid release to the environment.
- Wear protective gloves, protective clothing, and eye and face protection.
- Wear respiratory protection.
- IF exposed or concerned, get medical advice.
- Specific treatment – see the information on the label and Section 4 of this SDS.
- Collect spillage.
- IF SWALLOWED: Get emergency medical help immediately. Specific treatment – see the information on the label and Section 4 of the SDS. Rinse mouth.
- IF ON SKIN: Wash with plenty of water under the safety shower. Specific treatment – see the information on the label and Section 4 of the SDS.
- If skin irritation or rash occurs: Get medical help.
- Take off contaminated clothing and wash it before reuse.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get emergency medical help immediately. Specific treatment is urgent– see the information on the label and Section 4 of the SDS.
- Store locked up in a well-ventilated place. Keep containers tightly closed.
- Dispose of contents/container to a licensed waste facility and in accordance with local and national regulatory requirements.

- Prevent contamination of food, feed, drinking water and eating utensils.
- Flush eyes immediately with clean running water after accidental eye contact.
- Invert the empty container over the spray or mixing tank and 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 rinse water to the contents of the spray tank before destroying the empty container.
- Avoid contact with the spray mixture as far as possible during application.
- Avoid spray drift onto other crops, grazing, rivers or dams.
- Clean applicator thoroughly after use and dispose of wash water where it will not contaminate crops, grazing, rivers or dams.

**RELEVANT SUBSTANCES**

| Chemical name | w/w % | CAS no. |
|---|---|---|
| Bromoxynil | 30–60% | 1689-84-5 |
| Ethane -1,2-diol (monoethylene glycol) | <10% | 107-21-1 |

**FIRST AID**

Provide this SDS to medical personnel for treatment. Emergency personnel should wear protective clothing appropriate to the type and degree of contamination.

Remove contaminated clothing and move the affected person away from the contamination area. Keep the person warm, calm, and comfortable. First Aid personnel should pay attention to their own safety.

Take the container label or product name with you when seeking medical attention.

**Eye contact**: Rinse/flush the eyes gently with water from the eye wash fountain for several minutes (at least 15 minutes), while holding the eyelids apart. Check for and remove contact lenses if easy to do so. Continue rinsing. Obtain medical attention if irritation occurs and persists.

**Skin contact:** Remove all contaminated clothing and shoes. Immediately rinse the skin with plenty of water for 15 to 20 minutes under the safety shower. Wash contaminated clothing before re-use. Obtain medical attention.

**Inhalation:** Remove the affected victim from exposure to an area with fresh air. Keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Immediately obtain medical attention.

**Ingestion:** Obtain immediate medical attention or call a poison control centre for treatment advice. If conscious, rinse mouth thoroughly with water. Drink plenty of water. Never give anything by mouth to an unconscious or convulsing person. Do not induce vomiting unless directed to do so by a medical professional. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomits.

## TOXICOLOGICAL INFORMATION

**Most important symptoms/effects, acute and delayed**

Suspected of harming the unborn child.

**Notes to physician**

Treat symptomatically and supportively.

NOTICE TO THE USER: This agricultural remedy is to be used only according to the directions of this label. It is an offense under the Act to use this product inconsistent with the directions on the label.

## RESISTANCE WARNING

For the purpose of resistance management **BROMOTRIL® P 500 SC** is classified as a group code 6/24 herbicide. Any population of a specific weed may contain individuals which have a natural resistance against **BROMOTRIL® P 500 SC** or other group code 6/24 herbicides. If these herbicides are used repeatedly the resistant individuals can eventually dominate the weed population. These resistant weeds will probably not be controlled by **BROMOTRIL® P 500 SC** or any other group code 6/24 herbicide.

To delay the occurrence of resistance the following can be done:

- Avoid the repeated exclusive use of herbicides in the same group code. Alternate with or tank mix with herbicides from other group codes.
- Integrate with other methods of control (chemical, biological and cultural) in weed control programmes.

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

## MODE OF ACTION

6/24: Inhibition of photosynthesis at PSII – Histidine 215 binders/uncouplers.

## DIRECTIONS FOR USE

**Use only as indicated.**

- Do not apply **BROMOTRIL® P 500 SC** to weeds that have been or is subjected to moisture or any other stress condition. Apply only during conditions which enhance active weed growth.
- Since **BROMOTRIL® P 500 SC** is a contact herbicide, thorough wetting of weed foliage is essential.
- Only weeds present at time of application will be controlled and not those which will germinate after application.
- The weeds must not be beyond the 6-leaf stage at the time of application.
- Leaf scorching may occur in wheat and barley after application but will not detrimentally affect the yield.

- Only use the higher recommended rate for aerial application.

### Compatibility

**BROMOTRIL® P 500 SC** is compatible with MCPA and ATRANEX® 500 SC (Reg. no. L5352). Consult the supplier in the event of any uncertainty regarding compatibility.

### Mixing instructions

Half fill the spray tank with clean water. It is essential that the water pH is less than 7. If necessary, add a suitable buffer. Mix the required volume of **BROMOTRIL® P 500 SC** separately in a small volume of water and add to the spray tank while agitating. Fill the tank with water. It is important to note that continuous agitation is essential during mixing and application.

## APPLICATION

### Ground application

Ground application should be done with a conventional tractor mounted boom spray fitted with an efficient agitation mechanism which is capable to deliver an even distribution of the spray mixture over the target area. To ensure a thorough full cover spray of the weeds, flat fan nozzles should be used which, at a pressure of 200–300 kPa, should deliver 250–400 L spray mixture/ha.

### Aerial application

Aerial application of **BROMOTRIL® P 500 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 Pesticides). 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 be met:

- Volume: A spray mixture volume of 40 (at least) to 50 (recommended) litres per hectare 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 this product is applied aerially at a lower volume rate than recommended above.
- Droplet coverage: 40 to 60 droplets per $cm^2$ must be recovered at the target area.
- Droplet size: A droplet spectrum with a VMD of 350–400 micron 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 the aircraft dives, is in a climb or when banking.
- Use suitable atomising equipment that will produce the desired droplet size and coverage, but which will ensure the minimum loss of product. The spraying system must produce a droplet spectrum with the lowest possible Relative Span.
- Position all atomisers within the inner 60 to 75 % of the wingspan to prevent droplets from entering the wingtip vortices.
- The differences 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:
  a) Reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage);
  b) 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.

**APPLICATION RATES**

| CROP | DOSAGE (L/ha) | REMARKS |
|---|---|---|
| **Wheat**, **barley and oats** | 0.85–1.1 L | The cereal seedlings should be between the 3-leaf and the end of booting stage during application. Do not apply before the 3-leaf stage and from the beginning of the tillering stage onwards. Use the lower rate on young actively growing weeds. When the weeds are reaching the 6-leaf stage and when growth is slowed down by drought, the higher rate should be used. Also use the higher dosage for aerial application. |
| | 0.85 L plus 0.5–1.0 L MCPA | Apply as ground or aerial application. Use the higher rate of MCPA in the Eastern Free state when *Polygonum aviculare* is a problem. When MCPA is added, application to wheat must be between growth stages 7 and 13 according to the list of growth stages issued by the ARC Small Grain Institute in Bethlehem. Apply to barley when plants are in the 5- to 7-leaf stage. In the winter rainfall area when MCPA is added at 0,5 L/ha, the mixture may be applied in small grains from the 3-leaf stage of the crop. Apply tank mixtures between emergence and the 6-leaf stage of the weeds. |
| **Established lucerne** | 1.25–1.70 L | Apply after the lucerne has been cut. Use the higher rate when the weeds stand is dense and/or under dry conditions.<br>**WARNINGS:** Yellowing of lucerne leaves may occur after application, but this is of a temporary nature and will disappear after a few days without affecting the crop. |
| **Maize** | 0.850–1.25 L | Apply as ground or aerial spray when the weeds are fully emerged, but not older than the 6-leaf |

| CROP | DOSAGE (L/ha) | REMARKS |
|---|---|---|
| | | stage (3-leaf stage for problem weeds as indicated). Do not apply to maize younger than the 4-leaf stage. Use higher dosage rate for aerial application. |
| | 0.56 L **BROMOTRIL® P 500 SC** plus 1.0–2.0 L ATRANEX® 500 SC | Apply as a ground or aerial spray when the weeds are fully emerged, but older than the 6-leaf stage (3-leaf stage for problem weeds as indicated). The atrazine rate should be in accordance with the degree of persistence desired. Do not apply in maize younger than the 4-leaf stage. |
| | 0.85 L **BROMOTRIL® P 500 SC** plus 1.0 L MCPA (potassium salt) | Apply as ground or aerial spray when the weeds are fully emerged, but not older than the 6-leaf stage. It can be applied at any stage of development of maize. If crops are taller than 40 cm, directed spraying is recommended so that better wetting of weeds is obtained. Do not apply under cold, wet conditions as this may result in damage to the crop. |
| **Grain sorghum** | 0.56 L **BROMOTRIL® P 500 SC** plus 1.0–2.0 L ATRANEX® 500 SC | Follow the instructions for application in maize, but do not apply by air. |
| | 0.85 L **BROMTORIL® P 500 SC** plus 1 L MCPA (potassium salt) | Follow the instructions for application in maize, but do not apply by air. |

**Important notes**

- It is essential that the dilution water must have a pH of less than 7.
- Do not apply **BROMOTRIL® P 500 SC** when weeds are older than specified as this will result in poor weed control.
- The use of **BROMOTRIL® P 500 SC** in combination with a wetting agent is not advisable as this may lead to crop damage. If necessary, a suitable buffer may be added to the spray mixture.
- Avoid application when the weeds are covered with heavy dew or when the wind is blowing strongly.
- Ensure thorough coverage of weeds.
- Weeds which have not germinated at the time of application will not be controlled.
- Poor weed control may result if **BROMOTRIL® P 500 SC** is applied when the weeds are under moisture or other stress. Apply only during favorable climatic conditions when the weeds are actively growing.
- Under certain climatic conditions, **BROMOTRIL® P 500 SC** may cause some leaf scorch. However, yields will not be affected.

- When **BROMOTRIL® P 500 SC** is mixed with any other product, the information on the label of that product must be carefully consulted and the instructions followed. Consult your representative or the supplier before mixing **BROMOTRIL® P 500 SC** with other chemicals.
- Waiting period: When **BROMOTRIL® P 500 SC** is mixed with **ATRANEX® 500 SC,** the waiting periods must be adhered to before atrazine-sensitive crops can be planted.

  For more information consult the **ATRANEX® 500 SC** label.
- Note: This product controls some annual broadleaf weeds. Other broadleaf weeds that were not present during the development trials with the product, may possibly also be controlled to a certain degree. The registration holder does not accept any responsibility for unlisted weeds.

**WEEDS**

**Weeds that are normally controlled by BROMOTRIL® P 500 SC:**

| BOTANICAL NAME | COMMON NAME |
|---|---|
| ***Acanthospermum hispidum*** | upright starbur |
| ***Amaranthus deflexus*** | perennial pigweed |
| ***Amaranthus hybridus*** | common pigweed |
| ***Amaranthus spinosus*** | thorny pigweed |
| ***Amaranthus thunbergii*** | red pigweed |
| ***Amsinckia menziesii*** | Cape fiddleneck |
| ***Anthemis cotula*** | dog fennel |
| ***Arctotheca calendula*** | Cape marigold |
| ***Argemone subfusiformis*** | white flowered Mexican poppy |
| ***Bidens pilosa*** | blackjack |
| ***Capsella bursa-pastoris*** | Shepard's purse |
| ***Chenopodium album**** | white goosefoot |
| ***Chenopodium ambrosioides*** | wormseed goosefoot |
| ***Chenopodium carinatum*** | creeping goosefoot |
| ***Chenopodium multifidum*** | stinking goosefoot |
| ***Chenopodium murale*** | nettle leaf |
| ***Chenopodium schraderianum*** | Schrader's spinach |
| ***Citrullus lanatus*** | white watermelon |
| ***Cleome gynandra*** | spider wisp |

| BOTANICAL NAME | COMMON NAME |
|---|---|
| ***Cleome monophylla***** | spindlepod |
| ***Cosmos bipinnatus*** | Cosmos |
| ***Cucumis myriocarpus*** | striped wild cucumber |
| ***Datura ferox*** | large thorn apple |
| ***Datura stramonium*** | thornapple |
| ***Emex australis***** | spiny emex |
| ***Fallopia convolvulus*** | climbing knotweed |
| ***Flaveria bidentis*** | Smelter's bush |
| ***Galinsoga parviflora*** | Gallant soldier |
| ***Gisekia pharnaceoides*** | Gesekia |
| ***Helianthus annuus*** | sunflower |
| ***Hibiscus trionum*** | bladderweed |
| ***Ipomoea coscinosperma*** | pink morning glory |
| ***Ipomoea purpurea*** | morning glory |
| ***Lepidium bonariense*** | pepper weed |
| ***Melilotus indica*** | yellow sweet clover |
| ***Nicandra physalodes*** | apple of Peru |
| ***Pentzia grandiflora*** | stinkweed |
| ***Physalis angulata*** | Wild gooseberry |
| ***Polygonum aviculare***** | prostrate knotweed |
| ***Raphanus raphanistrum***** | wild radish |
| ***Richardia brasiliensis*** | tropical Richardia |
| ***Ricinus communis*** | castor oil |
| ***Schkuhria pinnata*** | dwarf marigold |
| ***Senecio burchellii*** | Molteno disease plant |
| ***Sesamum triphyllum*** | wild sesame |
| ***Sida cordifolia*** | heartleaf Sida |
| ***Sisymbrium thellungii***** | common wild mustard |

| BOTANICAL NAME | COMMON NAME |
|---|---|
| ***Solanum nigrum*** | black nightshade |
| ***Sonchus oleraceus*** | sow thistle |
| ***Tagetes minuta*** | khakiweed |
| ***Tribulus terrestris**** | common dubbeltjie |
| ***Vicia hirsuta*** | tiny purple vetch |
| ***Vicia sativa*** | broad-leaf purple vetch |
| ***Xanthium spinosum*** | spiny cocklebur |
| ***Xanthium strumarium*** | cocklebur |

* Ensure that plants are growing actively and are not subjected to any stress condition at application. Plants that have developed a waxy layer already might not be controlled effectively.

** Cotyledon to 3-leaf stage only.

Spray *Tribulus terrestris* before the seedling diameter exceeds 25 mm.