

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



Herbicide

ATOMIC 225 EC

Reg. No. L 10597 Act No. 36 of 1947
W 1301367

2 21/01/2023 – Dec2023

A selective emulsifiable concentrate herbicide for the post-emergence control of annual broad-leaved weeds in crops as listed.

ACTIVE INGREDIENT

ioxynil as the octanoate (nitrile) 225 g a.i./ℓ

GROUP

6

HERBICIDE



Hazard Statements:

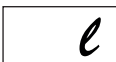
Combustible liquid.
Harmful if swallowed.
May be fatal if swallowed and enters airways.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye damage.
Toxic if inhaled.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Suspected of damaging fertility or the unborn child.

Very toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

Avoid breathing dust, fumes, mists, gas, vapours or spray.
IF ON SKIN: Wash with plenty of water and non-abrasive soap.
If skin irritation or rash occurs: Get medical help.

DANGER



villa

UN Number: 2902

Registration holder: VILLA CROP PROTECTION (PTY) LTD.
Co. Reg. No. 1992/002474/07
65 Botes Road, Glen Marais, Kempton Park, 1619
Tel. (011) 396 2233
Website: www.villacrop.co.za

IN CASE OF POISONING / 24 HR EMERGENCY NUMBERS:
Griffon Poison Centre: +27 82 446 8946
24 HR Transport / Spill Emergency no: (Hazcall24) +27 86 044 4411
(Client: Villa Crop Protection)

REFER TO DETAILS AS PRINTED ON CONTAINER / BAG

DIRECTIONS FOR USE ENCLOSED

Batch Number:
Date of Manufacture:

ATOMIC 225 EC

Reg. No. L 10597 Act No. 36 of 1947

W 1301367

HRAC HERBICIDE GROUP CODE: 6

ACTIVE INGREDIENT:

ioxynil as the octanoate (nitrile) 225 g/l

Registration holder:

VILLA CROP PROTECTION (PTY) LTD.

Co. Reg. No. 1992/002474/07

PO Box 10413, KEMPTON PARK, 1620

Tel. (011) 396 2233

WARNINGS

Allow the following number of days between the last application and harvest or grazing of the crops listed below:	
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Onions & Garlic	70
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NOTE

ABOVE-MENTIONED WITHHOLDING PERIODS REFER TO COMPLIANCE WITH LOCAL MAXIMUM RESIDUE LIMITS (MRL'S). HOWEVER, IT IS IMPORTANT TO NOTE THAT IMPORT TOLERANCES OF OTHER COUNTRIES MIGHT POSSIBLY BE EXCEEDED. IF THE TREATED CROP WILL BE EXPORTED, FIRST CONSULT THE RELEVANT IMPORTER OR EXPORTING BODY REGARDING THE USE OF THIS PRODUCT, MRL'S AND RECOMMENDED WITHHOLDING PERIODS.

Hazard statements

Combustible liquid.
Harmful if swallowed.
May be fatal if swallowed and enters airways.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye damage.
Toxic if inhaled.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Suspected of damaging fertility or the unborn child.
Very toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.

- Handle with care.
- Store under lock and key in a cool place.
- Store away from food, feeds, seed, fertilizers and other agricultural chemicals.
- Keep out of reach of children, uninformed persons and animals.
- **Combustible** - do not spray near open flames.
- **Re-entry:** Do not enter treated area within 1 day after treatment unless wearing protective clothing.
- **In case of poisoning call a doctor and make this label available to him/her.**

<p>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 weeds to the remedy concerned, as well as by the method, time and accuracy of application. The registration holder further 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 event of any uncertainty.</p>

PRECAUTIONS

Precautionary statements:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Avoid breathing dust, fumes, mists, gas, vapours or spray.
Wash hands and face 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.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
IF SWALLOWED: Get emergency medical help immediately.
IF ON SKIN: Wash with plenty of water and non-abrasive soap.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Get emergency medical help immediately.
Get medical help if you feel unwell.
Rinse mouth.
Do NOT induce vomiting.
If skin irritation or rash occurs: Get medical help.
Take off contaminated clothing and wash it before reuse.
Store in a well-ventilated place. Keep container tightly closed
Store locked up.
Dispose of content/container to suitable landfill in accordance with local regulations.

- Prevent drift onto other crops, grazing, rivers, dams or areas not under treatment or to nearby water sources.
- Do not use close to fishponds, fish tanks or aquaria.
- Thoroughly clean the spraying equipment directly after use and dispose of wash water where it will not contaminate food, grazing, boreholes, rivers or dams.
- Containers must be completely emptied before being disposed of.
- **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 (3) 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, feeds, drinking water and eating utensils.

Relevant hazardous components	
loxynil Octanoate	225 g/l
Cacium dodecylbenzene sulfonate	< 100 g/l
2-Methylpropan-1-ol	< 100 g/l
Solvent 150	< 700 g/l

SYMPTOMS OF HUMAN POISONING

There are no known signs and symptoms of **loxynil** poisoning.

FIRST AID TREATMENT

- **Inhalation:** Move the victim to fresh air immediately. Keep person calm and at rest. If breathing has stopped, perform artificial respiration and administer oxygen. Only qualified medical personnel should administer oxygen. Treat symptomatically and supportively as and when required. **Obtain medical advice if necessary.**
- **Skin contact:** Remove contaminated clothing, shoes and leather goods (e.g. leather belts and watch bands). Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. **Seek medical attention if necessary.**
- **Eye contact:** Immediately flush the eyes with gently flowing lukewarm water or saline solution for at least 20 minutes, holding the eyelid(s) open. Take care that rinse water does not get into unaffected eye or parts of face. **If irritation persists, obtain medical attention.**

- **Ingestion:** **Do not** induce vomiting. Have victim rinse mouth thoroughly with water and give water to drink. Remove chemical by gastric lavage and catharsis and give oxygen if respiration is depressed. Do not perform gastric lavage if patient is unconscious. Qualified medical personnel should perform administration of gastric lavage or oxygen. **Seek medical advice immediately.**

ADVICE TO PHYSICIAN

There is no known antidote. Treat symptomatically and supportively as and when required. Gastric lavage or the administration of activated charcoal with water may be indicated.

RESISTANCE WARNING

ATOMIC 225 EC is a group code 6 herbicide. Any weed population may contain individuals naturally resistant to **ATOMIC 225 EC** and other group code 6 herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds may not be controlled by **ATOMIC 225 EC** or any other group code 6 herbicide.

To delay herbicide resistance:

- 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 programmes.

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

MODE OF ACTION:

ATOMIC 225 EC is a selective, contact herbicide that is absorbed by foliage, with limited translocation. It acts by photosynthetic electron transport inhibition by binding at the Q_B site on the D1 protein of the photosystem II complex, resulting in formation of reactive chemical species that oxidise and degrade lipids and proteins. It also uncouples oxidative phosphorylation in the mitochondria resulting in disruption of ATP production.

USE RESTRICTIONS

- **Do not** apply **ATOMIC 225 EC** to weeds under drought or nutrient stress conditions.
- **Do not** apply when rain is expected within the following 12 hours.
- Irrigation should be withheld for 48 hours after an **ATOMIC 225 EC** application.

DIRECTIONS FOR USE: Use only as directed.

Compatibility:

- The compatibility of **ATOMIC 225 EC** 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 and water quality may vary from farm to farm, a compatibility test should always be carried out prior to application.

Mixing instructions:

- Shake the container well before use.
- Half fill the spray tank with clean water and add the required amount of **ATOMIC 225 EC**.
- Whilst maintaining agitation, complete filling operation.
- When mixing **ATOMIC 225 EC** with other registered herbicides, use the following procedure:
 - fill the spray tank three quarters with clean water and add the required amount of complementary herbicide, while agitating continuously,
 - add the **ATOMIC 225 EC** just before the tank is filled to full capacity.

Method of Application:

- Apply **ATOMIC 225 EC** only to young actively growing weeds, i.e. weeds growing in moist soil. It is essential that all parts of the weeds be thoroughly covered by the herbicide spray (particularly the growing points in the leaf axils), to ensure effective control. In order to achieve this, the following application instructions must be adhered to.

Ground application:

- For application by means of a tractor sprayer, the use of a conventional spray boom is recommended.
- Use a low spray pressure (100 to 300 kPa), so that **ATOMIC 225 EC** is applied as a coarse droplet spray.
- **Do not apply under high pressure / small droplet sizes as this may cause crop injury.**
- Ensure thorough coverage of the weeds, by using not less than 350 liters of spray mixture per hectare.

APPLICATION RATES**IMPORTANT**

Refer to “IMPORTANT NOTES” below.

Crop	Dosage / ha	Remarks
Onions Direct seeded	2 to 2.75 ℓ / ha	Apply after the onion plants have developed 3 to 4 true leaves.
Sett planted		Apply after the onion plants have developed 3 to 4 true leaves. This application should preferably follow a clean cultivation, or a pre-emergence herbicide treatment (e.g. Remove 250 EC).
Transplanted seedlings		Apply when the transplanted onions have become well established.
Garlic	2 to 2.75 ℓ / ha	Apply after the garlic plants developed 3 to 4 true leaves.

IMPORTANT NOTES

- **Do not** apply **ATOMIC 225 EC** when the weeds are older than as specified, as this will result in poor weed control.
- If it was not possible to apply **ATOMIC 225 EC** at the correct growth stage of the weeds, two (2) applications of **ATOMIC 225 EC** at 2 litres per hectare is recommended. Apply the first treatment as soon as possible after the crop has reached the correct growth stage and the second 2 to 3 weeks later.
- If weeds germinate again later in the season, **ATOMIC 225 EC** can be applied at 2 to 2.75 litres per hectare, depending on weed size, **but not to mature onion or garlic plants less than 70 days before the anticipated harvest date**.
- **Do not** tank mix **ATOMIC 225 EC** with post-emergence grass herbicides as serious phytotoxicity may occur.
- Leaf scorch and some distortion may be visible occur after application of **ATOMIC 225 EC**. This is usually temporary of nature and without an effect on the yield.
- **Do not** use **ATOMIC 225 EC** under the following adverse growing conditions as it may lead to crop injury: extreme cold or heat, frost, drought, waterlogging, wind or sand damage. The presence of pests or diseases before or after application may also cause crop damage.
- A three (3) hour drying period after application is required. **Do not** apply immediately before overhead irrigation or when rain is likely to fall.

WEED SPECIES NORMALLY CONTROLLED	
<i>Amaranthus hybridus</i>	Common pigweed
<i>Argemone mexicana</i>	Mexican prickly poppy
<i>Bidens pilosa</i>	Common black jack
<i>Capsella bursa-pastoris</i>	Shepherd's purse
<i>Chenopodium album</i>	White goosefoot
<i>Datura ferox</i>	Large thornapple
<i>Emex australis</i>	Spiny emex
<i>Erodium moschatum</i>	Musk heron's bill
<i>Galinsoga parviflora</i>	Small-flowered quick weed
<i>Nichandra physalodes</i>	Apple of peru
<i>Raphanus raphanistrum</i>	Wild radish
<i>Richardia brasiliensis</i>	Mexican richardia
<i>Sonchus oleraceus</i>	Common sow thistle
<i>Tagetes minuta</i>	Tall khaki weed
<i>Tribulus terrestris</i>	Common Devil's thorn

* - These weeds will only be controlled if sprayed in the very young rosette or seedling stage.

Consult the **Remove 250 EC** labels mentioned in this label for **WARNINGS, PRECAUTIONS, USE RESTRICTIONS** and **DIRECTIONS FOR USE**.

The following product mentioned in this label may be replaced with an equivalent product:

- **REMOVE 250 EC** (L 9437) = **RESULT 250 EC** (L 9434) (**Oxadiazon**).

REMOVE 250 EC is a registered product of
VILLA CROP PROTECTION (PTY) LTD.

RESULT 250 EC is a registered product of
UNIVERSAL CROP PROTECTION (PTY) LTD.