



Herbicide

INVADE 250 SL

Reg. No. L 10093 Act No. 36 of 1947
W 1301286

3. 17/01/2023 – Sept2023

A non-selective systemic plant killer / herbicide with residual activity for the control of problem / invader plants as listed. Registered also for use in forestry plantations/areas.

ACTIVE INGREDIENT

imazapyr (imidazolinone) 250 g/l

GROUP

2

HERBICIDE



DANGER

Hazard Statements:

May be harmful if swallowed.
Causes severe skin burns and eye damage.
Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

Avoid release to the environment.
Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.



villa

UN Number: 1760

Registration holder: UNIVERSAL CROP PROTECTION (PTY) LTD.

Co. Reg. No.1983/008184/07
P.O. Box 801, KEMPTON PARK, 1620
Tel. (011) 396 2233
Website: www.villacrop.co.za

24 HR EMERGENCY NUMBERS:

Griffon Poison Centre: +27 82 446 8946
24 HR Transport / Spill Emergency no: +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:

INVADE 250 SL
Reg. No. L 10093 Act No. 36 of 1947
W 1301286
HRAC HERBICIDE GROUP: 2

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imazapyr (imidazolinone)..... 250 g/l

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 KEMPTON PARK, 1620 Tel. (011) 396 2233

WARNINGS**IMPORTANT**

THE MISUSE / MISAPPLICATION OF THIS PRODUCT MAY CAUSE UNWANTED LONG TERM DAMAGE TO VEGETATION. IT IS IMPORTANT TO ADHERE TO ALL WARNINGS, USE RESTRICTIONS AND DIRECTIONS FOR USE INDICATED IN THIS LABEL.

Hazard statements:

May be harmful if swallowed.
Causes severe skin burns and eye damage
Very toxic to aquatic life with long lasting effects

- Handle with care.
- Store in a cool, dry place under lock and key, away from food, feed, seed, fertilizers and other agricultural remedies.
- Keep out of reach of children, animals and uninformed persons.
- Re-entry: Do not enter treated area until spray deposit has dried and unless wearing protective clothing.
- **In case of poisoning call a physician and make this label available to him/her.**

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 the event of any uncertainty.

PRECAUTIONS**Precautionary statements:**

Do not breathe fumes, mists or vapour.
Wash hands and face thoroughly after handling.
Avoid release to the environment.
Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Get medical help.
IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes. Get emergency medical help immediately.
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.
Wash contaminated clothing before use.
Collect spillage
Store locked up.
Dispose of content/container to suitable landfill in accordance with local regulations.

- Do not eat, drink or smoke while mixing, applying or before washing hands and face or change of clothing.
- Prevent spray drift onto other crops, grazing, rivers, dams and areas not under treatment.
- Mildly corrosive.
- Clean spraying equipment directly after use and dispose of wash water where it will not contaminate food, grazing, boreholes, rivers or dams.
- **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	
Imazapyr	250 g/l
Ammonium hydroxide	<150 g/l
OP-10	<50 g/l

FIRST AID TREATMENT

- **General advice:** Remove the victim from the area of exposure. Wash off remaining material with plenty of water. In the event of any complaints or symptoms, avoid further exposure.
- **Inhalation:** Remove person from contaminated area to fresh air and assist breathing if needed. Get medical help if irritation occurs.
- **Skin:** Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap for at least 15 to 20 minutes. Do not rub the skin. **Get emergency medical help immediately.**
- **Eyes:** Flush eyes with clean water for at least 15 to 20 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. **Get emergency medical help immediately.**
- **Ingestion:** **Get medical help** or call a poison control centre for treatment advice. **Do NOT induce vomiting.** Do not give anything by mouth to an unconscious person. If the person is alert, rinse mouth thoroughly with water and give the person a glass of water to drink.

RESISTANCE WARNING

INVADE 250 SL is a group code 2 herbicide. Any weed population may contain individuals naturally resistant to **INVADE 250 SL** and other group code 2 herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds may not be controlled by **INVADE 250 SL** or any other group code 2 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

Imazapyr is a systemic herbicide that works by inhibiting branched chain amino acid synthesis. It is also involved in the inhibition of acetolactate synthase (ALS, also known as acetohydroxy acid synthase, AHAS), blocking the biosynthesis of the amino acids valine, leucine and isoleucine, hence stopping cell division and plant growth.

USE RESTRICTIONS

- Do not allow **INVADE 250 SL** solutions to run off onto the soil from treated stumps. Although this product shows little horizontal or vertical movement in soil, any action to prevent movement of the active ingredient onto soil will minimise the risk of unwanted contact with crops or other non-target plants.
- **Waiting periods in Forestry applications** (replant scenarios after clear felling of *Eucalyptus* plantations followed by cut stump treatments):

Only replant the Forestry crop species listed below after the indicated waiting periods have lapsed.

Species to be planted	Waiting period	Remarks
Gum trees (<i>Eucalyptus</i> spp.)	4 months OR 1 year	<ul style="list-style-type: none"> • <i>Eucalyptus</i> seedlings should not be replanted into compartments with INVADE 250 SL-treated stumps within 4 months following treatment. This applies to typical forestry scenarios with heavier soils. • A one (1) year waiting period is recommended for sandy soils or soil with low clay and organic matter content. These soils occur in the Northern Kwa-Zulu Natal and along the eastern seaboard. • Do not use or apply a foliar application of INVADE 250 SL where thinning within a <i>Eucalyptus</i> compartment is to be carried out.
Pine trees (<i>Pinus</i> spp.)	Up to 30 days	<ul style="list-style-type: none"> • Only use INVADE 250 SL after seedlings are well established. • In cases where Pine seedlings are to be planted close to treated Gum tree stumps, wait 30 days to avoid possible effects of drift or run-off from the treated stumps. • However, if the Pine seedlings are to be planted between the old <i>Eucalyptus</i> stump rows, they may be planted immediately after clear felling is complete. • Do not use when drift may occur or if INVADE 250 SL may be deposit on foliage of non-target plants in the area in any other way.
Wattle trees (<i>Acacia</i> spp.)	None	<ul style="list-style-type: none"> • Only use INVADE 250 SL after seedlings are well established. • Wattle seedlings may be transplanted immediately after felling and treatment of <i>Eucalyptus</i> cut stumps. • Do not use when drift may occur or if INVADE 250 SL may be deposit on foliage of non-target plants in the area in any other way.

NOTE

- The waiting periods specified above apply to normal forestry replant scenarios. Where dissipation of **INVADE 250 SL** residues is in any way retarded, or where high residue levels exist in the root zone of transplanted seedlings (e.g. drought, dosage variations and/or foliar applications), the waiting period on planting should be extended.
- When invader plants and other weeds are to be controlled in forest compartments, **do not** apply more than 3 litres per hectare.

DIRECTIONS FOR USE: Use only as directed.

General Information:

- **INVADE 250 SL** is a systemic herbicide with limited variation in selectivity. *Eucalyptus* species are especially susceptible therefore it can be used for eradication and stump control of such species in most scenarios. Invader plants may also be controlled by **INVADE 250 SL** in forestry, conservation areas, industrial stands and grazing areas.
- The product is readily absorbed through foliage, roots and freshly cut sapwood regions, and then rapidly translocated to the meristematic tissues.
- Optimal effect of **Imazapyr** is achieved by applying it onto cut stumps where it gets into contact with the growing tissues from where it is translocated to other meristematic areas of the plant. This is more effective than foliar applications. The cut stump application method requires minimum amount of product and therefore minimises environmental exposure.
- Although **INVADE 250 SL** appears to be slow acting, growth is halted soon following application, and response to the herbicide is especially rapid under ideal growing conditions.
- When the target plants are under dormant or stressed conditions, slower action can be expected. Deformed leaf and shoot growth may appear under certain conditions, but further treatment will only be necessary if normal re-growth occurs after that.

- Optimal control of woody species will be achieved when the stems are cut close to the ground before **INVADE 250 SL** is applied onto the cut surface areas. Only treat newly cut surfaces. Branched or multi stem plants should be treated as individual plants.
- Alternatively, expose the sapwood by means of frilling right around the stem before applying the recommended dosage of **INVADE 250 SL**.
- Cut stems and frills must be performed as close to the ground as possible.

Compatibility:

- **INVADE 250 SL** is not compatible with oil-based adjuvants, including diesel.
- **INVADE 250 SL** is compatible with the adjuvant **Summit Super**.
- Do not add any additional adjuvants or other products to the tank mixture.
- When **INVADE 250 SL** is used in conjunction with any other agricultural remedy, all **WARNINGS**, **PRECAUTIONS** and **DIRECTIONS FOR USE** mentioned on that label, must be adhered to.

Mixing instructions:

- Half fill the mixing tank with clean water.
- Shake container well and measure the required volume of **INVADE 250 SL** and add it to the container/mixing tank.
- Stir the contents of the container/mixing tank continuously while filling to the required level with clean water.

APPLICATION RATES

IMPORTANT

ADHERE TO ALL “USE RESTRICTIONS”, “GENERAL INFORMATION” AND “DIRECTIONS FOR USE” ABOVE.

1. General problem plant control: Cut stump treatment of invader plants in forestry, grazing, industrial and conservation areas.

<i>Botanical name</i>	<i>Common name</i>	<i>Dosage rate per 10 l water</i>	<i>Remarks</i>
<i>Acacia mearnsii</i>	Black wattle	400 ml	Only use this product in Pine- and Wattle plantations in the case of forestry use. The listed target species are controlled optimally by cut stump treatments with INVADE 250 SL in grazing, industrial and conservation areas. Cut the stems of target plants as close to the ground as possible and apply the INVADE 250 SL solution before cut surfaces dry out. It is recommended to apply the solution with low pressure applicators, a dosing gun or a knapsack sprayer. Never use high pressure applicators. The solution may also be poured on. Apply 10 ml solution per 100 mm cut stem diameter.
<i>Eucalyptus grandis</i>	Gum tree	200 ml	
<i>Solanum mauritianum</i>	Bug weed	80 ml	

2. General problem plant control: Foliar application to invader plants in grazing, industrial and conservation areas.

<i>Botanical name</i>	<i>Common name</i>	<i>Dosage rate per 10 l water</i>	<i>Remarks</i>
<i>Eucalyptus grandis</i>	Gum tree	50 ml	Apply coppice re-growth when it reaches 0.5 to 1.0 metre height.
<i>Solanum mauritianum</i>	Bug weed	25 ml	Apply coppice re-growth when it reaches 0.5 to 1.0 metre height.

<i>Protasparagus</i> spp.	Katbos	25 ml	Apply to actively growing plants.
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NOTE

SUMMIT SUPER should be added at a rate of 500 ml per 100 litres water (0.5 %) spray mixture to all the above recommendations.

The following product mentioned in this label is equivalent to the product as listed below:

- **SUMMIT SUPER** (L 8539) = **BENEFIT PLUS** (L 8538).

SUMMIT SUPER and **BENEFIT PLUS** are registered products of
VILLA CROP PROTECTION (PTY) LTD.