

INVADE 250 SL

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: INVADE 250 SL
Other identifier: Imazapyr 250 SL
Recommended use: Herbicide
Restrictions on use: Agriculture

Supplier: Universal Crop Protection (Pty) Ltd.
Co. Reg. No.: 1983/008184/07
 PO Box 801,
 Kempton Park, 1620, South Africa
Telephone: (011) 396 2233
Fax: (011) 396 4666
Website: www.villacrop.co.za

Emergency telephone numbers:
24 Hr Transport / Spill emergency no:
 (Hazcall24) +27 86 044 4411
 (Client: Villa Crop Protection)
 Griffon Poison Information Centre +27 82 446 8946
 (Client: Villa Crop Protection)
Poisoning Emergency telephone numbers:
 Griffon Poison Information Centre +27 82 446 8946
 Poisons Information Centre +27 861 555 777

2. HAZARDS IDENTIFICATION

UN GHS, Regulation EC 1272/2008 [EU-GHS/CLP] EU & SANS 10234:2008		
Hazard classes	Hazard categories	H-statements
Health		
Oral	Acute Toxicity 5	H303
Skin	Skin Corrosion 1B	H314
Environment		
Aquatic acute	Aquatic acute 1	H400
Aquatic Chronic	Aquatic Chronic 1	H410

The most important adverse effects:
Physiochemical effects: None known.
Human health effects: May be harmful if swallowed.
 Causes severe skin burns and eye damage.
Label elements:



Signal word: Danger
Hazard statements:
 H303: May be harmful if swallowed.
 H314: Causes severe skin burns and eye damage.

H400: Very toxic to aquatic life.
 H410: Very toxic to aquatic life with long lasting effects.
Precautionary statements:
 P260: Do not breathe fumes, mists or vapour.
 P264: Wash hands and face thoroughly after handling.
 P273: Avoid release to the environment.
 P280: Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.
 P301+P330+P331+P317: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Get medical help.
 P302+P361+P354+P316: IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes. Get emergency medical help immediately.
 P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P354+P338+P316: 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.
 P363: Wash contaminated clothing before use.
 P391: Collect spillage.
 P405: Store locked up.
 P501: Dispose of contents/container to suitable landfill in accordance with local regulations.

Other hazards:

None known.

Toxicity:

Classification according to GHS: Category 5

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture.

Chemical name	CAS	Conc.(m/v %)	Classification EC 1272/2008
Imazapyr 96%	81510-83-0	25%	Aquatic acute 1 (H400) Aquatic Chronic 1 (H410)
Ammonium hydroxide	1336-21-6	< 15%	Skin Corrosion 1B (H314) Aquatic acute 1 (H400)
OP-10	9036-19-5	<5%	Acute Toxicity 4 (H302) Eye Damage 1 (H318) Aquatic chronic 3 (H412)

4. FIRST AID MEASURES

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.

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Inhalation: Remove person from contaminated area to fresh air and assist breathing if needed. Obtain 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 – 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.

Anticipated acute effects: May be harmful if swallowed. Causes severe skin burns and eye damage.

Anticipated delayed effects: None known.

Most important symptoms / effects: None known.

Advice to physician: Treat symptomatically and supportively. No specific antidote known. In cases of ingestion of large amounts, gastric lavage may be indicated.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Use carbon dioxide or dry chemical for small fires and water fog or foam for large fires.

Unsuitable Extinguishing Media: High volume water jet. Use a water jet only to cool heated containers.

Specific hazards: On heating toxic fumes, such as sulphur dioxide and oxides of nitrogen may be produced.

Special fire-fighting procedures: Remove spectators from surrounding area. Isolate the fire area and evacuate all personnel downwind of the fire. Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Remain upwind of fire. Avoid inhaling hazardous vapours and fumes from burning materials. Remove container from fire area if possible and without risk. Do not use high volume water jet, due to contamination risk. Do not scatter the burning material. Water can be used to cool unaffected containers but must be contained for later disposal. Contain fire control agents for later disposal. Avoid pollution of waterways by run-off from the site.

Personal protective equipment: Wear NIOSH / MSHA approved self-contained breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Avoid contact with eyes and skin. Do not breathe in spray fumes, mists or vapour. Ventilate area of spill or leak, especially in contained areas.

Protective equipment: Refer to Section 8 for personal protective equipment to be worn during containment and clean-up of a spill involving this product.

Emergency procedures: Alert firefighting personnel, evacuate unprotected personnel and animals.

Environmental Precautions: Prevent spilled product from entering sewers, waterways, or ground water.

This product is classified as very toxic to aquatic life with long lasting effects. Any spillages or uncontrolled discharges into watercourses should be reported immediately to the police and the Department of Water / Environmental Affairs.

Methods and Materials for Containment: Contain spilled product by diking area with sand or earth.

Methods and Materials for Clean-up: Cover contained spill with an inert absorbent material such as sand, vermiculite, earth or other appropriate material. Vacuum, scoop, or sweep up material and place the material into a clean, dry, sealable container. Label containers with the contents and dispose of according to local regulations. Do not place spilled material back in original container. Do not re-use spilled material. Collect washings and add to the drums already collected. Do not flush spilled material or washings into drains or waterways. To decontaminate the spill area, tools and equipment, wash with water and suitable detergent. See section 13 for disposal considerations.

7. HANDLING AND STORAGE

Handling:

Precautions for safe handling: Avoid contact with eyes and skin. Do not inhale fumes, mists or vapour. Ensure adequate ventilation during handling and use. Do not handle broken packages without protective equipment. Immediately clean up spills that occur during handling. Keep containers closed when not in use. In the case of contact with the product refer to First Aid Measures – Section 4.

General occupational hygiene: Practice good hygiene when using this product. Wash hands before eating, drinking, chewing gum, smoking, using the toilet or applying cosmetics. Worker should shower at the end of each workday. Launder all clothing before it is re-used.

Storage:

Conditions for safe storage: Keep under lock and key and out of reach of unauthorised persons, children, and animals. Store in its original, labelled container, tightly closed in an isolated, dry, cool, and well-ventilated area. Avoid excess heat. Not to be stored next to foodstuffs, feed and water supplies. Avoid cross contamination with other pesticides and fertilisers.

Incompatible substances and mixtures: Refer to product label.

Packaging material: Plastic/steel containers/drums.

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8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible concentration: no occupational exposure limits have been determined for the significant ingredients in this product

Engineering Controls:

It is essential to provide adequate ventilation. The measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. Local Exhaust: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OELs or other specified exposure limits. Local exhaust ventilation is preferred. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire and other applicable regulations.

Personal Protective Equipment:

Respiratory Protection: For most well-ventilated conditions, no respiratory protection should be needed. If used in a poorly ventilated area (airborne concentrations exceed exposure limits), use a NIOSH approved, air-purifying respirator with cartridges / canisters approved for organic vapours.

Hand Protection: Employees must wear chemically protective gloves to prevent against skin burn.

Eye Protection: Employees must wear a face-shield to prevent against eye contact. Contact lenses are not protective eye devices.

Skin and Body Protection: Employees must wear appropriate protective clothing, boots, hat to prevent repeated or prolonged skin contact with this product.

Emergency eyewash: Where there is any possibility that an employee's eyes may be exposed to this product, the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Light yellow, uniformity transparent liquid.

Odour: Mild amine odour.

Odour threshold: Not available.

pH (1% aqueous dilution): 6-10 (20 °C).

Melting point: Not available.

Freezing Point: Not available.

Boiling Point: Not available.

Flash Point: >93 °C.

Flammability: Not flammable.

Upper / lower explosion limits: Not available.

Vapour Pressure (mm Hg): Not available.

Relative Vapour Density: Not available.

Density / Relative density: 1.08 g/cm³ (20 °C).

Solubility: Readily soluble in water.

n-octanol / water partition coefficient: Not available.

Auto-ignition temperature: Not available.

Decomposition temperature: Not available.

Viscosity: Not available.

10. STABILITY AND REACTIVITY

Chemical stability: The product is stable for two years at ambient temperature and pressure, under normal storage and handling conditions. Avoid storage under extreme temperatures and conditions. Store below 50 °C, preferably below 30 °C, and not for prolonged periods in direct sunlight.

Reactivity: None known.

Possibility of hazardous reactions: Unlikely to occur.

Conditions to avoid: Extreme heat or exposure to flames.

Incompatible materials: Strong oxidizers, strong bases, strong reducing agents.

Hazardous decomposition products: Alcohols. carbon monoxide and carbon dioxide may form under burning conditions or with incomplete combustion.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Calculated according to GHS

Oral LD₅₀ (24h) > 3500 mg/kg (rat).

Dermal LD₅₀ (24h) >7500 mg/kg (rabbit).

Inhalation LC₅₀ (4h) > 12 mg/l (rat).

Skin corrosion and eye damage: Causes severe skin burns and eye damage.

Skin Sensitization: Not classified.

Respiratory Sensitization: Not classified.

Reproductive cell mutagenicity: Not classified.

Carcinogenicity: Not classified.

Reproductive toxicity: Not classified.

Specific target organ toxicity – single exposure: Not classified.

Specific target organ toxicity – repeated exposure: Not classified.

Aspiration hazard: Not classified.

Chronic Effects: Not classified.

POTENTIAL ADVERSE EFFECTS:

Ingestion: May be harmful if swallowed.

Skin and eye contact: Causes severe skin burns and eye damage.

12. ECOLOGICAL INFORMATION

This product is expected to be very toxic to aquatic life with long lasting effects.

ECOTOXICITY DATA:

Imazapyr

Fish:	rainbow trout	>100 mg/l.
LC ₅₀ (96 h)	bluegill sunfish	
	channel catfish	

Daphnia:

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LC ₅₀ (48 h)		>100 mg/ℓ
Algae:	<i>Selenastrum</i>	71 mg/ℓ
EC ₅₀ (120 h)	<i>Anabaena</i>	11.7 mg/ℓ
	<i>Skeletonema</i>	85.5 mg/ℓ
	<i>Navicula</i>	59 mg/ℓ
Birds:		
Acute oral LD ₅₀	bobwhite quail and mallard ducks	>2150 mg/kg.
Dietary LC ₅₀	bobwhite quail and mallard ducks	>5000mg/kg diet.
Bees:		
LD ₅₀ (contact)		>100 µg/bee.

ENVIRONMENTAL EFFECTS

Based on information for the active ingredient(s)

Plants: Following foliar application, residues in plants decline rapidly in the first 24 hours. The major residue in plants is the parent compound.

Persistence and degradability: In field dissipation studies, first order DT₅₀ 24–143 d. Aerobic soil degradation laboratory studies were generally longer, DT₅₀ 117 (biphasic) to 313 d. Degradation is primarily due to soil microbial activity, which is not represented in laboratory studies. In water, DT₅₀ 7 d; degradation is due to photolysis.

Bio-accumulative potential: Bioaccumulation in the environment is highly unlikely.

Mobility in soil: Not determined.

Other adverse effects: Not determined.

13. DISPOSAL CONSIDERATIONS

Waste: Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be reused or re-processed. Never pour untreated waste or surplus product into public sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers. Comply with local legislation applying to waste disposal. The product may be taken to a registered waste disposal site or incineration plant.

Container: Emptied containers retain product residues. Do not re-use the empty container for any other purpose. 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. 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. Observe all labelled safeguards until container is destroyed.

14. TRANSPORT INFORMATION

UN Number: 1760

Road Transport ADR / ORD:

Class: 8
 Packaging group: III
 UN Proper Shipping Name: CORROSIVE LIQUID, N.O.S. (imazapyr 250 g/ℓ)

Maritime Transport IMDG / IMO:

Class: 8
 Packaging group: III
 UN Proper Shipping Name: CORROSIVE LIQUID, N.O.S. (imazapyr 250 g/ℓ)

Marine pollutant (Y/N): Yes

Air Transport IATA / ICAO:

Class: 8
 Packaging group: III
 UN Proper Shipping Name: CORROSIVE LIQUID, N.O.S. (imazapyr 250 g/ℓ)

Special / Environmental Precautions: Wedge drums tightly to avoid movement.

Transport in bulk: Refer to MARPOL 73/78, Annex II and the IBC code.

15. REGULATORY INFORMATION

Safety, health and environmental regulations / legislation for the mixture:

OHSA 1993 Regulations for Hazardous Chemical Substances.

Relevant information regarding restrictions: None.

EU regulation: Regulation EC1272/2008 (EU-GHS/CLP)

Other national regulations: None.

Chemical Safety Assessment carried out? No

16. OTHER INFORMATION

Packaging: Packed in 1, 5, 10, 20, 25, 50 and 200 litres plastic/steel containers/drums and labelled according to South African regulations and guidelines.

Other hazard statements, abbreviations and explanations:

H302: Harmful if swallowed.

H318: Causes serious eye damage.

H412: Harmful to aquatic life with long lasting effects.

IATA: International Air Transport Association.

IBC: International Bulk Chemical.

ICAO: International Civil Aviation Organization.

IMDG: International Maritime Dangerous Goods

IMO: International Maritime Organization.

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LD₅₀ value: The median lethal dose or the amount of a toxic agent that is sufficient to kill 50 percent of a population within a certain period of time.

OEL/RL: Occupational exposure limit-recommended limit.

TWA: Time-weighted average – The average exposure over a specified period, usually a nominal eight hours.

ST/STEL: Short-term exposure limits.

Disclaimer: The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage and use of the product. It is not applicable to unusual or non-standard uses of the product nor where instructions or recommendations are not followed. All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.

END OF DOCUMENT

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For detailed information on revisions, contact the Registration holder.