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Product : FORMAT 250 SL	

1. PRODUCT AND COMPANY IDENTIFICATION:

COMPANY: ARYSTA LIFESCIENCE (PTY) LTD

PRODUCT NAME: FORMAT 250 SL

ADDRESS: P. O. Box 1726 7 Sunbury Office Park
Mount Edgecombe Douglas Saunders Drive
4300 La Lucia
4019

PHONE No: 031 514 5600
EMERGENCY No.: Toll free number (24 hours): 082911
For overseas customers (24 hours): +27-11-254 1911

2. COMPOSITION / INFORMATION ON INGREDIENTS:

Chemical name: 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid, salt with 2-propanamine (1:1)

Formula: C₁₆ H₂₄ N₄ O₃

Chemical family: Imidazolinone

Mol Wt: 320.400 (Imazapyr-isopropylammonium)

COMPONENT	CAS NO.	%
Isopropylamine salt of Imazapyr	81810-83-0	25
Inerts	N/A	75

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3. HAZARD IDENTIFICATION:

Harmful to aquatic organisms.

4. FIRST- AID MEASURES:

Inhalation: Move the person to fresh air. If person is not breathing, call 082 911 or an ambulance, then give artificial respiration, preferably mouth to mouth if possible. Call the poison control center or doctor for further treatment advice.

Skin or clothing contact: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call the poison control center for treatment advice.

Eye contact: Hold eye open and rinse slowly and gently with plenty of water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing. Call the poison control center for treatment advice.

Ingestion: Call the poison control center or doctor for further treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told by a poison control center or doctor. Do not give anything to an unconscious person. Have the product container or label with you when calling a poison control center or doctor or going for treatment.

Advice to physician: There is no specific antidote. Treat symptomatically.

5. FIRE-FIGHTING MEASURES:

Extinguishing agents: Use water fog, foam, CO₂, dry chemical extinguishing media.

Special hazard: None known.

Personal protective equipment: Fire fighters should be equipped with self-contained breathing apparatus and turnout gear.

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6. ACCIDENTAL RELEASE MEASURES:

Personal precautions:

Respiratory Protection: Supplied air respirators should be worn if large quantities of mist/dust are generated or prolonged exposure possible.

Eye protection: Chemical goggles when respirator does not provide eye protection.

Protective clothing: Gloves and protective clothing as necessary to prevent skin contact.

Ventilation: Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

Environmental precautions:

In case of large spillage of this product, avoid contact, isolate area and keep out animals and unprotected persons. For small spills wear personal protective equipment as specified by the label.

For a liquid spill: Dike and contain the spill with inert material (sand, earth, etc.) and transfer the liquid and solid Diking materials to separate container for disposal.

Methods for cleaning up: Pesticide wastes are actually hazardous. Wastes resulting from the product may be disposed of on site at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix or rinsate is a violation of the South Africa law. If these wastes cannot be disposed of according to label instructions, contact the state agency responsible for pesticide

7. HANDLING AND STORAGE:

Handling: Read the label before use. Avoid contact with skin and eyes. When using do not eat, drink or smoke. Wash face and hands before eating, drinking or smoking.

Storage: Store in original container in cool, dry, well-ventilated area place away from ignition sources, heat or flame. Do not store below -12.2°C.

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8. EXPOSURE CONTROL / PERSONAL PROTECTION:

Occupational exposure limits: TWA 0.5 mg/m³ – BASF recommended

PERSONAL PROTECTIVE EQUIPMENT:

Respirator: Supplied air respirators should be worn if large quantities of mist/dust are generated or prolonged exposure possible.

Clothing and Gloves: Gloves and protective clothing as necessary to prevent skin contact.

Eye protection: Chemical goggles when respirator does not provide eye protection.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance: Clear brown to amber liquid

Odour: Amine

Explosive properties: None

Flash point: > 93°C

Oxidising properties: No

pH: 5.5-7.5

Relative density: 1.07 ± 0.01g/ml @ 20°C

Solubility in water: Soluble

Storage stability: Stable if stored 10°F = - 12.2°C. See 7.2 which indicates that the product should not be stored below 10°F.

10. STABILITY AND REACTIVITY:

Stability: Stable, but do not store below -12.2°C

Incompatibility: Oxidising agents and reducing agents

Hazardous decomposition: Including but not limited to oxides of carbon and nitrogen.

11. TOXICOLOGY INFORMATION:

Acute oral LD₅₀: Rat (both sexes) > 5000 mg/kg

Acute dermal LD₅₀: Rabbit (both sexes) > 2000 mg/kg

Acute inhalation LC₅₀ (4 h): Rat, no mortality > 1.58 mg/l

Acute inhalation LC₅₀

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(1 hr calculated):	No mortality > 6.32 mg/l
Acute inhalation toxicity (rat):	> 5.1 mg/l (nominal),
Acute skin irritation:	Irritating
Acute eye irritation:	Irritating to eye with recovery by day 3.
Dermal sensitisation:	Mild sensitizer
Carcinogenicity:	Not listed
Mutagenicity:	No mutagenic activity was observed in Technical Imazapyr by all test methods used.
Teratogenicity:	No teratogenic or fetotoxic effects were found at all dose levels tested in mice and rats.

12. ECOLOGICAL INFORMATION:

Residual Soil Activity:	Imazapyr can remain active in the soil for 6 months to 2 years.
Adsorption:	Imazapyr is strongly adsorbed by soils. It is usually found only in the top few inches of soil.
Persistence / Degradation:	Imazapyr may be broken down by exposure to sunlight. Soil microorganisms contribute to the breakdown of Imazapyr. Very little Imazapyr is lost by evaporation.
Soil Microorganisms:	Imazapyr has very little effect on microorganisms. Studies to determine the effect of Imazapyr treatments on soil microorganisms show that the compound has no adverse effect on numbers of soil organisms, growth rates of microbial populations, soil enzymes, nitrogen cycling, sulphur oxidation, mineralization of organic substrates or normal soil respiration.
Birds (LD₅₀):	Imazapyr is practically non-toxic to birds. Acute oral LD ₅₀ for bobwhite quail and mallard ducks >2150 mg/kg. Dietary LC ₅₀ (8 d) for bobwhite quail and mallard ducks >5000 mg/kg.
Fish (LC₅₀):	Imazapyr is of low toxicity to fish and invertebrates. LC ₅₀ (96 h) for rainbow trout, bluegill sunfish, and channel catfish >100 mg/l.
Daphnia (LC₅₀):	LC ₅₀ (48 h) >100 mg/l.

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Algae: It has a low toxicity algae 7-Day EC₅₀: Freshwater blue-green alga (*Anabaena flos-aquae*): 11.7 mg/l
Freshwater green alga (*Selenastrum capricornutum*): 71.0 mg/l

Bees: It is of low toxicity to bees. Dermal LD₅₀ for honeybees >100 mg/bee.

13. DISPOSAL CONSIDERATIONS:

Pesticide disposal:

Wastes resulting from the product may be disposed of on site at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of the federal law. If these wastes cannot be disposed of according to label instructions, contact the state agency responsible for pesticide regulation.

Package product wastes:

For plastic containers: Triple rise (or equivalent) and rinsate to spray tank. Then offer recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

For bulk containers: Reusable containers should be returned to the point of purchase for cleaning and re-filling.

For mini bulk containers: Clean all tanks on an approved loading pad so rinsate can be collected and mixed into the solution or in a dedicated tank. Using a high-pressure sprayer, rinse several times with small amounts of water to minimize rinsate.

14. TRANSPORT INFORMATION:

UN No: Not regulated for transport.

15. REGULATORY INFORMATION:

Symbol: Xi

Indication of danger: Irritant

Risk phrases:

R 36 Irritating to eyes.

R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases:

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- S 2** Keep out of the reach of children.
- S 26** In case of contact with eyes rinse immediately with plenty of water and seek medical advice
- S 61** Avoid release to the environment. Refer to special instructions/Safety data sheets.

National legislation: In accordance with the South African National Road Traffic Act, 1996 (Act 93 of 1996), the Fire Brigade Act, 1987 (Act 99 of 1987) and the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993).

16. OTHER INFORMATION:

FORMAT 250 SL is the property of ARYSTA LIFESCIENCE (PTY) LTD
The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors or omissions or the consequence thereof.

REFERENCES

- Similar product MSDS.
 - The Pesticide Manual; Eleventh Edition; Editor Clive Tomlin; Crop Protection Publications, 1997.
 - Dangerous Goods Regulations; IATA International Air Transport Association, 41st Edition, Effective 1 January 2000.
 - IMDG Code, Vol. 2, 2000 Edition/.
 - EXTOXNET, Pesticide Information Profiles, Revised June 1996. The primary files are maintained and archived at the Oregon State University.
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