

PRIME 50 EC

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE

Product Name: PRIME 50 EC
Other identifier: Lufenuron 50 EC
Recommended use: Insecticide
Restrictions on use: Agriculture

Supplier: Villa Crop Protection (Pty) Ltd.
Co. Reg. No.: 1992/002474/07
PO Box 10413,
Aston Manor, 1630, 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
Physical		
Flammable liquid	Flammable Liquid 3	H226
Health		
Oral	Acute Toxicity 5	H303
Aspiration hazard	Aspiration Toxicity 2	H305
Dermal	Acute Toxicity 5 Skin Irritation 3 Skin Sensitization 1	H313 H316 H317
Eye	Eye Irritation 2	H319
Inhalation	Acute Toxicity 4	H332
Single Target Organ Toxicity - Single Exposure	STOT SE 3	H335
Carcinogenicity	Carcinogenicity 2	H351
Environment		
Aquatic Acute	Aquatic Acute 1	H400
Aquatic Chronic	Aquatic Chronic 1	H410

The most important adverse effects:

Physiochemical effects: Flammable liquid and vapour.

Human health effects:

May be harmful if swallowed or in contact with skin.
May be harmful if swallowed and enters airways.
Causes mild skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause respiratory irritation.
Suspected to cause cancer.

Label elements:



Signal word: Warning.

Hazard statements:

H226: Flammable liquid and vapour.
H303: May be harmful if swallowed.
H305: May be harmful if swallowed and enters airways.
H313: May be harmful in contact with skin.
H316: Causes mild skin irritation.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H332: Harmful if inhaled.
H335: May cause respiratory irritation.
H351: Suspected to cause cancer.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P203: Obtain, read and follow all safety instructions before use.
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233: Keep container tightly closed.
P240: Ground and bond container and receiving equipment.
P241: Use explosion-proof equipment.
P242: Use non-sparking tools.
P243: Take action to prevent static discharges.
P261: Avoid breathing mist, vapours and spray.
P264+P265: Wash hands thoroughly after handling. Do not touch eyes.
P271: Use only outdoors or in a well-ventilated area.
P272: Contaminated work clothing should not be allowed out of the workplace.

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P273: Avoid release into the environment.
P280: Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.
P301+P316: IF SWALLOWED: Get emergency medical help immediately.
P302+P332+P333+P317: IF ON SKIN or skin irritation or rash occurs: Get medical help.
P302+P352: IF ON SKIN: Wash with plenty of water and non-abrasive soap.
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [shower].
P304+P340+P317: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P318: IF exposed or concerned, get medical advice.
P331: Do NOT induce vomiting.
P337+P317: If eye irritation persists: Get medical help.
P391: Collect spillage.
P403+P235: Store in a well-ventilated place. Keep cool.
P405: Store locked up.
P501: Dispose of content/container to suitable landfill in accordance with local regulations.
Special labelling of certain mixtures:
None known.
Other hazards:
None known.
Toxicity:
Classification according to GHS: Cat. 4

			Acute Toxicity 5 (H303) Skin Irritation 3 (H316) Eye Irritation 2B (H320) Aspiration Toxicity 2 (H305) Aquatic Acute 1 (H400) Flammable Liquid 3 (H226)
Toximul DL66	N/A	> 5%	Flammable Liquid 4 (H227) Skin Irritation 2 (H315) Eye Irritation 2/2A (H319) STOT SE 3 (H335) Aspiration Toxicity 2 (H305) Acute Toxicity 5 (H303)
Toximul DM83	N/A	> 3%	Flammable Liquid 4 (H227) Skin Irritation 2 (H315) Eye Irritation 2/2A (H319) STOT SE 3 (H335) Aspiration Toxicity 2 (H305) Acute Toxicity 5 (H303)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture.

Composition:

Chemical Name	CAS	Conc. (m/v %)	Classification EC 1272/2008
Lufenuron 98% TC	103055-07-8	5 %	Skin Sensitization 1 (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Isophorone	78-59-1	> 20%	Acute Toxicity 4 (H302) Acute Toxicity 4 (H312) Eye Irritation 2 (H319) STOT SE 3 (H335) Carcinogenicity 2 (H351)
Fluidar 100	N/A	> 60%	Acute Toxicity 4 (H332)

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.

Inhalation: Remove person from contaminated area to fresh air and assist breathing as needed. Seek medical attention if irritation occurs. **Seek medical attention if you feel unwell after inhalation.**

Skin contact: Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. **Obtain medical attention if irritation or rash occurs.**

Eye contact: 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. **Obtain medical attention if irritation persists.**

Ingestion: **Seek medical attention immediately** or call a poison control centre for treatment advice. **Do not induce vomiting** unless instructed to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person. If the person is alert, rinse mouth thoroughly with water.

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Anticipated acute effects: May be harmful if swallowed or in contact with skin. May be harmful if swallowed and enters airways. Causes mild skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause respiratory irritation.

Anticipated delayed effects: Suspected to cause cancer.

Most important symptoms/effects: None known.

Advice to physician: Treat symptomatically and supportively. No specific antidote known.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Water fog (or if unavailable fine water spray), foam, dry agent (carbon dioxide, dry chemical powder).

Unsuitable Extinguishing Media: High volume water jet, as this will spread the fire. Use a water jet only to cool heated containers.

Specific hazards: Use appropriate extinguishing media for combustibles in the area. Residual organic material will emit toxic fumes when burning.

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 mist or fumes/vapours.** 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 organisms and may cause long-term adverse effects in the aquatic

environment. 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: May be harmful if swallowed or in contact with skin. May be harmful if swallowed and enters airways. Avoid contact with eyes and skin. Ensure adequate ventilation during handling and use. Do not inhale spray mist or vapours. Do not handle broken packages without protective equipment. Immediately clean up spills that occur during handling. Keep containers tightly 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. Do not store near heat, open flame, sources of ignition or hot surfaces. 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: Fluorinated plastic containers.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

Permissible concentration

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Components	Exposure limits	Type of exposure limit	Source
Isophorone	4 ppm	8-hour TWA	www.osha.gov
Light aromatic petroleum solvent	100 ppm	8-hour TWA	OEL
Naphthalene	10 ppm	8-hour TWA	www.osha.gov

Engineering Controls:

It is essential to provide adequate ventilation. The measures appropriate for a particular work site 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: Employee must wear appropriate chemical resistant rubber gloves (PVC or neoprene gloves) to prevent skin contact with this product.

Eye Protection: Employee must wear chemical resistant safety goggles or face-shield to prevent eye contact with this product. Contact lenses are not protective eye devices.

Skin and Body Protection: Employee must wear appropriate protective (impervious) clothing e.g. long-sleeved cotton overalls, rubber boots, face shield and 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 eyewash fountain or appropriate alternative within the immediate work area for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Yellowish brown liquid.

Odour: Typical pesticide odour.

pH (1% aqueous dilution): 6.8.

Melting point: Not available. 168.7°C to 169.4°C (technical material, depending on purity).

Freezing Point: Not available.

Boiling Point: Not available.

Flash Point: 45°C.

Flammability: Flammable.

Upper/lower explosion limits: Not available.

Vapour Pressure (mm Hg): Not available.

Relative Vapour Density: Not available.

Density/Relative density: 0.924 g/m³

Solubility: Not available.

n-octanol/water partition coefficient: K_{ow} (logP) = 5.12 (data for technical material).

Auto-ignition temperature: Not available.

Decomposition temperature: Not available.

Viscosity: Not available.

10. STABILITY AND REACTIVITY

Chemical Stability: The product is stable for 2 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: None known.

Conditions to Avoid: Sensitive to freezing and warm storage conditions.

Incompatible Materials: None known.

Hazardous Decomposition Products: None known.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Calculated according to GHS.

Oral LD₅₀ (24 h) >2000 mg/kg (rat).

Dermal LD₅₀ (24 h) >2000 mg/kg (rat).

Inhalation LC₅₀ (4 h) >15 mg/l (vapours, rat).

Skin irritation/Corrosion: Causes mild skin irritation.

Eye Damage/Irritation: Causes serious eye irritation.

Skin Sensitization: May cause an allergic skin reaction.

Respiratory Sensitization: Not classified.

Reproductive cell mutagenicity: Not classified.

Carcinogenicity: Suspected of causing cancer.

Reproductive toxicity: Not classified.

Specific target organ toxicity – single exposure: May cause respiratory irritation.

Specific target organ toxicity – repeated exposure: Not classified.

Aspiration hazard: May be harmful if swallowed and enters airways.

Chronic Effects: Not available.

POTENTIAL ADVERSE EFFECTS:

Inhalation: Harmful if inhaled.

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Eye contact: Due to the inerts, this product causes serious eye irritation.

Skin contact: May be harmful in contact with skin. Causes mild skin irritation.

Ingestion: May be harmful if swallowed.

12. ECOLOGICAL INFORMATION

This product is very toxic to aquatic organisms with long lasting effects.

ECOTOXICITY DATA:

Lufenuron

Fish:

LC ₅₀ (96 h)	Rainbow trout	>73 mg/ℓ
	Carp	>63 mg/ℓ
	Bluegill sunfish	>29 mg/ℓ
	Catfish	>45 mg/ℓ

Daphnia: Toxic

LC ₅₀ (48 h)	1.3 µg/ℓ
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Algae:

EC ₅₀ (72 h)	<i>Selenastrum capricornutum</i>	8.8 mg/ℓ
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Birds:

Acute oral LD ₅₀	Bobwhite quail	>2000 mg/kg.
	Mallard ducks	>2000 mg/kg.
Dietary LC ₅₀ (8 d)	Bobwhite quail	>5200 mg/kg.
	Mallard ducks	>5200 mg/kg.

Bees:

LD ₅₀ contact	>200 µg/bee.
LD ₅₀ oral	>197 µg/bee.

Worms:

LC ₅₀ (14 d)	>1000 mg/kg.
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ENVIRONMENTAL EFFECTS:

Based on information for the active ingredient

Plants: No metabolites occurred in significant amounts in the investigated target crops (cotton, tomatoes).

Persistence and degradability: Lufenuron is rapidly degraded in biologically active soils under aerobic conditions. DT₅₀ 9.4-83.1 days.

Bio-accumulative Potential: Log K_{ow} 5.12. Major route of elimination through faeces with very little degradation.

Mobility in soil: Lufenuron showed a very strong adsorption onto soil particles: K_{oc} (mean value) 38 mg/g o.c.

Other adverse effects: Not determined.

13. DISPOSAL CONSIDERATION

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: 1993
Road Transport ADR/IRD:
Class: 3
Packing Group: III
UN Proper Shipping Name: **FLAMMABLE LIQUID, N.O.S**
(Lufenuron 50 g/ℓ)

Maritime Transport IMDG/IMO:
Class: 3
Packing Group: III
UN Proper Shipping Name: **FLAMMABLE LIQUID, N.O.S**
(Lufenuron 50 g/ℓ)

Marine Pollutant (Y/N): Yes
Air Transport IATA/ICAO:
Class: 3
Packing Group: III
UN Proper Shipping Name: **FLAMMABLE LIQUID, N.O.S**
(Lufenuron 50 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:

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OHSAS 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

Packed in fluorinated 1, 5, 10, 15, 20 & 25 litres plastic containers and labeled according to South African regulations and guidelines.

Other hazard statements, abbreviations and explanations:

H227: Combustible liquid.

H302: Harmful if swallowed.

H312: Harmful in contact with skin.

H315: Causes skin irritation.

H320: Causes eye irritation.

IATA: International Air Transport Association.

IBC: International Bulk Chemical.

ICAO: International Civil Aviation Organization.

IMDG: International Maritime Dangerous Goods

IMO: International Maritime Organization.

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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Next revision: May 2027

For detailed information on revisions, contact the Registration holder.