PARADOX 125 SE

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **PARADOX 125 SE**
Other identifier: **Pyraclostrobin + Epoxiconazole 125 SE**
Recommended use: Fungicide
Restrictions on use: Agriculture

Registration Holder: **Universal Crop Protection (Pty) Ltd.**
Co. Reg. No.: 1983/008184/07
65 Botes Road, Glen Marais
Kempton Park, 1619, 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		
Aspiration Toxicity	Aspiration Toxicity 1	H304
Skin	Skin irritation 2	H315
Eye	Eye Damage 1	H318
Carcinogenicity	Carcinogenicity 2	H351
Reproductive toxicity	Reproductive toxicity 1B	H360DF
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 fatal if swallowed and enters airways.
Causes skin irritation.
Causes serious eye damage.
Suspected of causing cancer.
May damage fertility or the unborn child.

Label elements:

Signal word: Danger.
Hazard statements:
H304: May be fatal if swallowed and enters airways.
H315: Causes skin irritation.
H318: Causes serious eye damage.
H351: Suspected of causing cancer.
H360: May damage fertility or the unborn child.
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.
P264+P265: Wash hands thoroughly after handling. Do not touch eyes.
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+P352: IF ON SKIN: Wash with plenty of water and non-abrasive soap.
P305+P354+P338+P317: IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical help.
P318: IF exposed or concerned, get medical advice.
P331: Do NOT induce vomiting.
P332+P317: If skin irritation occurs: get medical help.
P362+P364: Take off contaminated clothing and wash it before reuse.
P391: Collect spillage.
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: Unclassified.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture.
Composition:

Chemical Name	CAS	Conc. (m/v %)	Classification EC 1272/2008
Pyraclostrobin	175013-18-0	6.25%	Skin irritation 2 (H315)

			Acute Toxicity 3 (H331) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Epoxiconazole	133855-98-8	6.25%	Carcinogenicity 2 (H351) Aquatic chronic 2 (H411) Reproductive toxicity 1B (H360 DF)
MEG	107-21-1	<10 %	Acute Toxicity 4 (H302)
Tersperse 4894	68551-12-2	<5 %	Skin irritation 2 (H315) Eye Damage 1 (H318) Aquatic Acute 1 (H400)
Soprophor BSU	99734-09-5	<5 %	Aquatic Acute 3 (H412)
Proxel GXL	2634-33-5	<1%	Skin irritation 2 (H315) Eye Damage 1 (H318) Skin sensitization 2 (H317) Aquatic acute 1 (H400)
Acetophenone	98-86-2	<15%	Aquatic Toxicity 4 (H302)
Solgad 150 ULN	64742-94-5	<50%	Aspiration Toxicity 1 (H304)
Acetic acid	64-19-7	<1%	Flammable liquid 3 (H226) Skin Corrosion 1A (H314)

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 and if symptoms persist consult a doctor. If exposed or concerned, get medical advice.
Inhalation: Remove person from contaminated area to fresh air and assist breathing as needed. Seek medical attention if irritation occurs.
Skin: Remove contaminated clothing and shoes. Wash skin gently and thoroughly with cold water and non-abrasive soap. **Obtain medical attention if irritation occurs.**
Eyes: Flush eyes with clean water. Lift eyelids to facilitate irrigation. If present, remove contact lenses and continue rinsing. **Seek medical attention**.
Ingestion: Get emergency medical help immediately 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.
Anticipated acute effects: May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye damage.
Anticipated delayed effects:
Suspected of causing cancer.
May damage fertility or the unborn child.
Most important symptoms/effects: None known.
Advice to physician: There is no specific antidote available. Treat symptomatically and supportively.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Extinguish fires with carbon dioxide, dry powder, water fog or alcohol-resistant foam.
Unsuitable Extinguishing Media: Water jet.
Specific hazards: In case of fire and/or explosion do not breathe fumes.
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. Keep upwind. 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 bunker gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid contact with eyes and skin. Do not breathe in fumes, mists or spray 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 to be very toxic to aquatic organisms and causes 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, earth or silica gel.
Methods and Materials for Clean-up: Cover contained spill with an inert absorbent material such as sand, earth or other appropriate non-combustible 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 (i.e. organic solvent, detergent bleach or caustic). Add the solution to the drums already collected. Open burning or dumping of this material is prohibited. See section 13 for disposal considerations.

7. HANDLING AND STORAGE

Handling:
Precautions for safe handling: Avoid contact with skin and eyes. Ensure adequate ventilation during handling and use. Do not handle broken containers 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 material. 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 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 excessive 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: Fluorinated bottles.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible concentration:

Components	Exposure limits	Type of exposure limit	Source
Acetic acid	10 ppm (ST) 15ppm (C) 40 ppm	TWA (8 hours)	www.osha.gov

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 OSHA PELs 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: Causes skin irritation. Wear impervious rubber gloves to prevent against skin contact.
Eye Protection: Employees must wear chemical safety goggles to prevent against eye contact. Contact lenses are not protective eye devices.
Skin and Body Protection: Employees must wear appropriate protective impervious clothing, rubber boots, hat and equipment to prevent repeated or prolonged skin contact with this substance.
Emergency eyewash: Where there is any possibility that an employee's eyes may be exposed to this mixture; the employer should provide an eyewash fountain or appropriate alternative within the immediate work area for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Off white liquid.
Odour: Aromatic.
pH (1% aqueous dilution): 2.5 – 5.
Melting point: Not available.
Freezing Point: Not available.
Boiling Point: Not available.
Flash Point: Not applicable.
Flammability: Not flammable.
Upper/lower explosion limits: Not explosive.
Vapour Pressure (mm Hg): Not available.
Relative Vapour Density: Not available.
Density: 1.01 g/mℓ.
Solubility: Dispersible.
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 LD_{50} (24 h) >6200 mg/kg (rat).
Dermal LD_{50} (24 h) >15500 mg/kg (rat).
Inhalation LC_{50} (4 h) >8 mg/ℓ (rat).
Skin Irritation/Corrosion: Causes skin irritation.
Eye Damage/Irritation: Causes serious eye damage.
Skin Sensitization: Not classified.
Respiratory Sensitization: Not classified.
Reproductive cell mutagenicity: Not classified.
Carcinogenicity: Suspected of causing cancer.
Reproductive toxicity: May damage fertility or the unborn child.
Specific target organ toxicity – single exposure: Not classified.
Specific target organ toxicity – repeated exposure: Not classified.
Aspiration hazard: May be fatal if swallowed and enters airways.
Chronic Effects: Not available.
POTENTIAL ADVERSE EFFECTS:
Inhalation: Not expected to cause inhalation acute toxicity.
Skin contact: Causes skin irritation.
Eye contact: Causes serious eye damage.
Ingestion: May be fatal if swallowed or enters airways.

12. ECOLOGICAL INFORMATION

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

ECOTOXICITY DATA:
Fish:
Pyraclostrobin:

LC_{50} (96 h)	Rainbow trout	0.0062 mg/ℓ
	Bluegill sunfish	0.0196-0.0335 mg/ℓ
	Carp	0.0121-0.0252 mg/ℓ
	Sheepshead minnows	0.0769 mg/ℓ

Epoxiconazole

LC50 (96 h)	Rainbow trout	3.14 mg/ℓ
	Bluegill sunfish	4.6-6.8 mg/ℓ

Daphnia:

Pyraclostrobin:

EC_{50} (48 h)		0.28 mg/ℓ

Epoxiconazole

LC_{50} (48 h)		0.016 mg/ℓ

Algae:

Pyraclostrobin:

E_rC_{50} (96 h)	*Pseudokirchneriella subcapitata*	>0.843 mg/ℓ
	Navicula pelliculosa	>0.0139 mg/ℓ
	Skeletonema costatum	>0.09 mg/ℓ

Epoxiconazole

E_bC_{50} (72 h)	*Pseudokirchneriella subcapitata*	1.19 mg/ℓ
E_rC_{50}		>10 mg/ℓ

Birds:

Pyraclostrobin:

Acute oral LD_{50}	Bobwhite quail	>2000 mg/kg
Dietary LC_{50} (5 d)	Canaries	>1446 mg/kg
	Bobwhite quail and Mallard ducks	>5000 mg/kg diet

Epoxiconazole

Acute oral LD_{50}	Bobwhite quail	>2000 mg/kg
Dietary LC_{50}	Bobwhite quail	5000 mg/kg diet

Bees:
Pyraclostrobin:

LD_{50}

	(oral)	>73 ug/bee
	(contact)	>100 µg/bee

Epoxiconazole
LD_{50}

	Oral	>83µg/bee
Worms:	Contact	>100µg/bee

Pyraclostrobin:
LC_{50} (14 d)

	Earthworms	283 mg/kg soil

Epoxiconazole
LC_{50} (14 d)

	Earthworms	>1000 mg/kg soil

Plants:

Epoxiconazole
There is extensive degradation.

ENVIRONMENTAL EFFECTS:
Persistence and degradability
Pyraclostrobin:
DT50 (lab, aerobic, 20 °C) 12–101 d (5 soils); (field) 8–37 d (6 locations).

Epoxiconazole
Degradation in soil is by microbial activity, DT50 c. 2–3 mo.
Bio-accumulative Potential: Not determined for both pyraclostrobin and epoxiconazole.
Mobility in soil:
Pyraclostrobin: Koc 6000–16000 ml/g.
Epoxiconazole: Koc 957–2647.
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. The product may be taken to a registered waste disposal site or incineration plant. Where possible, recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.
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: 3082
Road Transport ADR/IRD:
Class: 9
Packaging group: III
UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (**Pyraclostrobin** 62.5 g/L, **Epoxiconazole** 62.5 g/L)
Maritime Transport IMDG/IMO:
Class: 9
Packaging group: III
UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (**Pyraclostrobin** 62.5 g/L, **Epoxiconazole** 62.5 g/L)
Marine Pollutant (Y/N): Yes, Considered a marine pollutant.
Air transport IATA/ICAO:
Class: 9
Packaging group: III
UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (**Pyraclostrobin** 62.5 g/L, **Epoxiconazole** 62.5 g/L)
Special/Environmental Precautions: None known.
Transport in bulk (according to MARPOL 73/78, Annex II and the IBC code): Not available.

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 500 millilitres,1, 2, 5, 10 and 20 litres fluorinated bottles and labelled according to South African regulations and guidelines.

Other hazard statements, abbreviations, and explanations:
H226: Flammable liquid and vapour.
H302: Harmful if swallowed.
H314: Causes sever skin burns and eye damage.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H331: Toxic if inhaled.
H411: Toxic to aquatic life with long lasting effects.
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.
LD_{50} 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.