

VILLA 2,4-D ESTER 500 EC

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: 2,4-D ESTER 500 EC
Other identifier: 2,4-D Isoctylester 500 EC
Recommended use: Herbicide
Restrictions on use: Agriculture

Supplier: Villa Crop Protection (Pty) Ltd.
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:
Envirosure. +27 31 205 4918
(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

Villa Crop Protection Emergency number:
National Safety, Health and Environmental Manager:
+27 63 698 0668

2. HAZARDS IDENTIFICATION

UN GHS, Regulation EC 1272/2008 [EU-GHS/CLP] EU & SANS 10234:2008		
Hazard classes	Hazard categories	H-statements
Physical		
Flammable liquids	Flam. Liq. 4	H227
Health		
Oral	Acute Tox. 4	H302
Aspiration hazard	Asp. Tox. 1	H304
Dermal	Acute Tox. 5 Skin Irrit. 2	H313 H315
Skin sensitizer	Skin Sens. 1	H317
Eye	Eye Dam. 1	H318
Environment		
Aquatic acute	Aquatic acute 1	H400
Aquatic chronic	Aquatic chronic 1	H410

The most important adverse effects:
Physiochemical effects:
Combustible liquid

Human health effects:

Harmful if swallowed.
May be fatal if swallowed and enters airways.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye damage.

Label elements:



Signal word: Danger.

Hazard statements:

H227: Combustible liquid.
H302: Harmful if swallowed.
H304: May be fatal if swallowed and enters airways.
H313: May be harmful in contact with skin.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H318: Causes serious eye damage.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P264: Wash hands and face thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P273: Avoid release into the environment.
P280: Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.
P301/310: IF SWALLOWED: Immediately call a POISON CENTER.
P302/352: IF ON SKIN: Wash with plenty of water and non-abrasive soap.
P305/351/338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTRE.
P331: Do NOT induce vomiting.
P332/313: If skin irritation occurs: get medical advice.
P333/313: If skin irritation or rash occurs: Get medical advice.
P362/364: Take off contaminated clothing and wash it before reuse.
P391: Collect spillage.
P405: Store locked up.

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P501: Dispose of contents/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

Classification according to WHO: Cat. II

Classification according to GPIC (Active): Cat. II

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture.

Composition:

Chemical Name	CAS	Conc. (m/v %)	Classification EC 1272/2008
2,4-D Isoctyl Ester 98.4% TC	25168-26-7	73.62 %	Acute Tox. 4 (H302) Skin Sens. 1 (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Benzene sulfonic acid	90194-26-6	< 2%	Skin Irrit. 2 (H315) Eye Dam. 1 (H318)
Nonane, Decane, Undecane	111-84-2, 124-18-5, 1120-21-4	< 30%	Flam. Liq. 3 (H226) Asp. Tox. 1 (H304) Skin Irrit. 2 (H315) STOT SE 3 (H336) Aquatic Chronic 1 (H410)
			Flam. Liq. 3 (H226) Asp. Tox. 1 (H304)
			Asp. Tox. 1 (H304)

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 consult a doctor.

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

Skin: Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap.

Immediately seek medical attention if irritation persists.

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. **Seek medical attention immediately.**

Ingestion: Seek medical attention or call a poison control centre for treatment advice. May cause gastrointestinal irritation or ulceration. Due to the solvent, this product is classified as an aspiration hazard. Mild to severe pulmonary injury could be caused due to the aspiration of small amounts of product during vomiting or ingestion. 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. **Seek medical attention immediately.**

Anticipated acute effects:

Harmful if swallowed.
Harmful in contact with skin.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye damage.

Harmful if inhaled.

Anticipated delayed effects: None known.

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: 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: May release irritating fumes upon combustion such as oxides of carbon and nitrogen. Hazard products arising from combustion – Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

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.

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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. Do not breathe in spray mist or 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. Aquatic toxicity is flagged: This product is classified to be 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: Harmful if swallowed. Avoid contact with skin and eyes. 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 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 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:** FHTPC Fluorinated plastic containers.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

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

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: The use of chemically protective (impervious) gloves is recommended to prevent against skin contact.

Eye Protection: The use of chemical safety goggles is recommended to prevent against eye contact. Contact lenses are not protective eye devices.

Skin and Body Protection: Employee must wear appropriate protective (impervious) clothing; Rubber boots, hat and equipment to prevent repeated or prolonged skin contact with this substance. Do not wear leather clothing.

Emergency eyewash: Where there is any possibility that an employee's eyes may be exposed to this substance; 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: Clear yellow to dark brown liquid.

Odour: Characteristic phenolic odour.

pH (1% aqueous dilution): 8.0 to 10.0

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Melting point: Not available.
Freezing Point: Not available.
Boiling Point: Not available.
Flash Point: 79°C.
Flammability: Combustible.
Upper/lower explosion limits: Not explosive.
Vapour Pressure (mm Hg): Not available.
Relative Vapour Density: Not available.
Density: 1.046 to 1.175 at 20°C.
Solubility: Emulsifies 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: Will not 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 (24 h) rat >870 mg/kg.

Dermal LD₅₀ (24 h) rat >4000 mg/kg.

Inhalation LC₅₀ (4 h) rat Unclassified.

Skin Irritation/Corrosion: Causes skin irritation.

Eye Damage/Irritation: Causes serious eye damage.

Skin Sensitization: May cause an allergic skin reaction.

Respiratory Sensitization: Not available.

Reproductive cell mutagenicity: Not available.

Carcinogenicity: Not available.

Reproductive toxicity: Not available.

Specific target organ toxicity – single exposure: Not available.

Specific target organ toxicity – repeated exposure: Not available.

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

Chronic Effects: Not available.

POTENTIAL ADVERSE EFFECTS:

Inhalation: Not likely to be hazardous by inhalation.

Skin contact: Prolonged or repeated skin contact may cause skin irritation.

Eye contact: Due to the inerts, this product may cause severe irritation with cornea injury.

Ingestion: Harmful if swallowed, may cause gastrointestinal irritation or ulceration.

12. ECOLOGICAL INFORMATION

This product is very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

ECOTOXICITY DATA: Active ingredient.

Fish:

LC ₅₀ (96 h)	Cut throat	
	trout	0.5 – 1.2 mg/l.

Bees:

Toxic to bees

Plants: In plants, metabolism involves hydroxylation, decarboxylation, cleavage of the acid side-chain, and ring opening.

ENVIRONMENTAL EFFECTS:

Persistence and degradability: In soil, microbial degradation involves hydroxylation, decarboxylation, cleavage of the acid side-chain, and ring opening. DT₅₀ in soil <7 d. K_{oc} c. 60. Rapid degradation in the soil prevents significant downward movement under normal condition.

Bio-accumulative Potential: Not determined.

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. Triple rinse empty containers by inverting the empty container over the spray or mixing tank and allow draining for at least 30 seconds after the flow has slowed down to a

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drip. Thereafter, rinse the container three times with a volume of water equal to a third of that of the container. Add the rinsing's to the contents of the spray tank before destroying the container in the prescribed manner. Destroy the container by perforating and flattening and dispose of through an approved waste dump site, incineration plant or recycling company. 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. (2,4-dichlorophenoxyacetic acid)

Maritime Transport IMDG/IMO:
 Class: 9
 Packaging group: III
 UN Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (2,4-dichlorophenoxyacetic acid)

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. (2,4-dichlorophenoxyacetic acid)

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:
 OSHA 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 fluorinated 5, 10, 20, 25, 50 and 100 litres FHTPC fluorinated plastic containers and labelled according to South African regulations and guidelines.

Additional H-statement (s) (formulants)
H226: Flammable liquid and vapour.
H336: May cause drowsiness or dizziness.

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.