

2,4-D Fix

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: 2,4 D FIX
Other identifier: 2,4 D (Sodium salt) 25 SL
Recommended use: Plant Growth Regulator
Restrictions on use: Agriculture and small scale farming

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		
Dermal	Skin Sens. 1	H317
Eye	Eye Irrit. 2/2 A	H319
Environment		
Aquatic chronic	Aquatic chronic 3	H412

The most important adverse effects:
Physicochemical effects:
 None known
Human health effects:
 May cause an allergic skin reaction and causes serious eye irritation.

Label elements:



Signal word: Warning.
Hazard statements:
 H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.
 H412: Harmful to aquatic life with long lasting effects.

Precautionary statements:

P261: Avoid breathing fumes, mists, vapours or spray (respiratory sensitization).
 P264+P265: Wash hands thoroughly after handling. Do not touch eyes.
 P272: Contaminated work clothing should not be allowed out of the workplace.
 P273: Avoid release to the environment.
 P280: Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.
 P302+P352: IF ON SKIN: Wash with plenty of water and non-abrasive soap.
 P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P333+P317: If skin irritation or rash occurs: Get medical help.
 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: Unregulated.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture
Composition:

Chemical Name	CAS	Conc. (m/v %)	Classification EC 1272/2008
2,4 D (Sodium salt)	2707-72-9	2.5%	Acute Tox. 4 (H302) Skin Sens. 1 (H317) Eye Dam. 1 (H318) Aquatic chronic 2 (H411)

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. If irritation persists, consult a doctor.

Inhalation: Remove person from contaminated area to fresh air if irritation occurs. Seek medical attention if irritation persists.

Skin: Remove contaminated clothing and wash before re-using. Flush skin with water and then wash with soap and water. **Seek medical attention** if skin irritation persists.

Eyes: Flush eyes with clean water for at least 15 minutes. Lift eyelids to facilitate irrigation. If present, remove

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contact lenses after 5 minutes and continue rinsing. **Seek medical attention** if irritation persists.

Ingestion: Rinse mouth with water. Seek medical attention or call a poison control centre for treatment advice if the victim feels unwell. 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.

Anticipated acute effects: None known.

Anticipated delayed effects: None known.

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, carbon dioxide, foam and dry chemical.

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

Specific hazards: Hazardous products that may arise from combustion include carbon monoxide and hydrogen chloride.

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 protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid contact with skin and eyes.

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: Keep spilled product from entering sewers, waterways or ground water.

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 skin and eyes. Do not handle broken packages without protective equipment. Immediately clean up spills that occur during handling. 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 again.

Storage:

Conditions for safe storage: Store in its original container in dry, cool, well-ventilated area. Avoid excess heat. Not to be stored next to foodstuffs, feed and water supplies. Keep out of reach of children, uninformed persons and animals. Do not contaminate other pesticides and fertilizers.

Incompatible substances and mixtures: Refer to product label.

Packaging material: Plastic containers and drums.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible concentration: No occupational exposure limits has 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 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: No respiratory protection should be needed.

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

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Eye Protection: The use of chemical safety goggles or face shield 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.

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: Colourless liquid, soluble concentrate.

Odour: None.

pH: 6.9 at 25 °C

Melting point: Not available.

Freezing Point: Not available.

Boiling Point: Not available.

Flash Point: Not available.

Flammability: Not flammable.

Upper/lower explosion limits: Not available.

Vapour Pressure (mm Hg): Not available.

Relative Vapour Density: Not available.

Density: 1.008 g/ml.

Solubility: Completely 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: Will not occur.

Conditions to Avoid: Extreme heat or exposure to flames.

Incompatible Materials: None known.

Hazardous Decomposition Products: Carbon monoxide and hydrogen chloride.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Calculated according to WHO (conforms to GHS):

Oral LD₅₀ rat > 24 472 mg/kg

Dermal LD₅₀ rabbit > 61 276 mg/kg

Inhalation LC₅₀ rat (24 h) > 68 mg/l

Skin Irritation: Not calculated.

Eye Irritation: Causes serious eye irritation.

Skin Sensitization: May cause an allergic skin reaction.

Respiratory Sensitization: Not calculated.

Reproductive cell mutagenicity: Not calculated.

Carcinogenicity: Not calculated.

Reproductive toxicity: Not calculated.

Specific target organ toxicity – single exposure: Not calculated.

Specific target organ toxicity – repeated exposure: Not calculated.

Aspiration hazard: Not calculated.

Chronic Effects (other targets e.g. developmental): Not calculated.

POTENTIAL ADVERSE EFFECTS:

Inhalation: Not calculated.

Skin contact: May cause an allergic skin reaction.

Eye contact: Not calculated.

Ingestion: Not calculated.

12: ECOLOGICAL INFORMATION

This product is harmful to aquatic life with long lasting effects.

ECOTOXICITY DATA: Active ingredient – 2,4-D Sodium Salt

Fish:

LC₅₀ (96h) Rainbow trout > 100 mg/l

Birds:

Acute oral (96h) Wild ducks > 2025 mg/kg

2,4-D Birds:

Acute oral LD₅₀ Wild ducks > 1000 mg/kg

Japanese quail 668 mg/kg

Pigeons 668 mg/kg

Pheasants 472 mg/kg

Daphnia LC₅₀ 235 mg/l

(21 d.)

Algae EC₅₀ (14 d) *Lemna gibba* 0.58 mg/l

Bees (oral) 104.5 mg/bee

Earthworms 860 mg/kg

LC₅₀ (7 d)

ENVIRONMENTAL EFFECTS:

Regarding 2,4-D:

When use as recommended, 2,4-D does not appear to produce toxic effects on any animal species.

Animals: In rats, following oral administration, elimination is rapid, and mainly as the unchanged substance. Following single doses of up to 10 mg/kg, excretion is almost complete after 24 hours, although, with higher doses, complete elimination takes longer.

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

Persistence and degradability: DT₅₀ in soil <7 d. K_{oc} c. 60.

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Bio-accumulative Potential: Not determined.
Mobility in soil: Rapid degradation in soil prevents significant downward movement under normal conditions.
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.

Container: 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 drip. Thereafter, rinse the container three times with a volume of water equal to a minimum of one third of that of the container. Add the rinsings to the contents of the spray tank before recycling or destroying the container in the prescribed manner. 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: Not regulated

Special/Environmental Precautions: Not available.

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 500ml, 1, 5, 10, 20, 25, 100 and 200 litres plastic containers and drums, labelled according to South African regulations and guidelines.

Other hazard statements, abbreviations and explanations:

H302: Harmful if swallowed.

H318: Causes serious eye damage.

H411: Toxic 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.

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.

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.