TROOPER 320 SL

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: **TROOPER 320 SL**
Other identifier: **2,4-D + Dicamba 320 SL**
Recommended use: Herbicide
Restrictions on use: Agriculture

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		
Oral	Acute Tox. 5	H303
Dermal	Acute Tox. 5 Skin Corr.1B Skin sens. 1	H313 H314 H317
Eye	Eye Dam. 1	H318
Specific target organ toxicity single exposure	STOT SE 3	H335
Environment		
Aquatic chronic	Aquatic chronic 3	H412

The most important adverse effects:
Physiochemical effects: None known
Human health effects:
May be harmful if swallowed or in contact with skin. (Acute Tox. 5)
Causes severe skin burns and eye damage. (Skin Corr. 1B)
May cause an allergic skin reaction. (Skin sens.1)
Causes serious eye damage. (Eye Dam. 1)
May cause respiratory irritation (STOT SE 3).

Label elements:

Signal word: Danger
Hazard statements:
H303: May be harmful if swallowed.
H313: May be harmful in contact with skin.
H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction.
H318: Causes serious eye damage.
H335: May cause respiratory irritation.
H412: Harmful to aquatic life with long lasting effects.
Precautionary statements:
P260: Do not breathe mist, vapours, or spray.
P264+P265: Wash hands and face thoroughly after handling. Do not touch eyes.
P271: Use only outdoors in a well-ventilated area.
P272: Contaminated work clothing should not be allowed out of the workplace.
P273: Avoid release into the environment.
P280: Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.
P301+P317: IF SWALLOWED: Get medical help.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P3217+P352: IF ON SKIN: Wash with plenty of water and non-abrasive soap. Get medical help.
P302+P361+P354: IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P354+P338: IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P316: Get emergency medical help immediately.
P333+P317: If skin irritation or rash occurs: Get medical help.
P363: Wash contaminated clothing before use.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P405: Store locked up.
P501: Dispose of contents/container to suitable landfill in accordance with local regulations.

Other hazards:
None known.
Toxicity:
Classification according to GHS: Category 5

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture

Composition:

Chemical name	CAS	Conc. (m/v %)	Classification EC 1272/2008
Dicamba	1918-00-9	7.2%	Acute Tox.4 (H302) Eye Dam.1 (H318) Aquatic Chronic 2 (H412)
2,4-D	94-75-7	22.3 %	Acute Tox 4 (H302) Skin Sens. 1 (H317) Eye Dam 1 (H318) STOT SE 3 (H335) Aquatic chronic 3 (H412)
Aminopropyl morpholine	123-00-2	<20 %	Acute Tox.4 (H302) Skin Corr.1B (H314) Eye Dam 1 (H318)

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. Immediately consult a doctor.
Inhalation: Remove person from contaminated area to fresh air and assist breathing if needed. **Seek medical attention if you feel unwell.**
Skin: Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. **TROOPER 320 SL** causes severe skin burns and eye damage. Obtain 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.
Ingestion: Seek medical attention 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.
Anticipated acute effects: Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. May cause respiratory irritation.
Anticipated delayed effects: None known.
Most important symptoms / effects: None known.
Advice to physician: Treat symptomatically. Induce emises. Perform gastric lavage if large amounts are ingested. Wash area of contact thoroughly.

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: None known.
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/fumes 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. This

product is classified as harmful to aquatic life with long lasting effects 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 spilt 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 spilt material back in original container. Do not re-use spilt material. Collect washings and add to the drums already collected. Do not flush spilt 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: Causes severe skin burns and eye damage. Avoid contact with eyes and skin. Ensure adequate ventilation during handling and use. 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 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: Plastic containers.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible concentration:

Components	Exposure limits	Type of exposure limit	Source
2,4-D	10 mg/m^3	8-hour TWA	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 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: The use of chemically protective impervious gloves is recommended to prevent against skin contact.

Eye Protection: The use of chemical face shield/safety goggles is recommended 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 product.

Emergency eyewash: Where there is any possibility that an employee's eyes may be exposed to this product, 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: Orange/ brown liquid.
Odour: Sulphurous odour.
Odour threshold: Not available.
pH (1% aqueous dilution): 8-8.5
Melting point: Not available.
Freezing Point: Not available.
Boiling Point: Not available.

Flash Point: Not flammable.
Flammability: Not flammable, not combustible.
Upper / lower explosion limits: Not explosive.
Vapour Pressure (mm Hg): Not available.
Relative Vapour Density: Not available.
Density / Relative density: Not available.
Solubility: 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: No hazardous reactions if stored and handled as indicated.
Possibility of hazardous reactions: None known.
Conditions to avoid: Protect from sparks, heat, and open flames. Avoid prolonged exposure to direct sunlight.
Incompatible materials: None known.
Hazardous decomposition products: Hydrogen chloride, carbon monoxide, carbon dioxide.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:
Calculate according to GHS:
Oral LD_{50} (24h) >200 mg/kg (rat)
Dermal LD_{50} 3817.69 mg/kg
Inhalation LC_{50} 0.19mg/l
Skin Corrosion: Causes severe skin burns and eye damage.
Eye Damage: Causes serious eye damage.
Skin Sensitization: May cause an allergic skin reaction.
Respiratory Sensitization: Not classified.
Reproductive cell mutagenicity: Not classified.
Carcinogenicity: Not classified.
Reproductive toxicity: Not classified.
Specific target organ toxicity – single exposure: May cause respiratory irritation.
Specific target organ toxicity – repeated exposure: Not classified.
Aspiration hazard: Not classified.
Chronic Effects: Not classified.
POTENTIAL ADVERSE EFFECTS:
Inhalation: Not available.
Skin: Due to inert, this product can cause severe skin burns and eye damage. May cause an allergic skin reaction.
Eye: This product can cause serious eye damage.
Ingestion: May be harmful if swallowed.
Other information: May cause respiratory irritation.

12. ECOLOGICAL INFORMATION

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

ECOTOXICITY DATA:
Active ingredients: Dicamba and 2,4-D

Fish:

Dicamba		
LC_{50} (96 h)	Rainbow trout Bluegill sunfish	135 mg/ℓ
2,4-D		
LC_{50} (96 h)	Rainbow trout	>100 mg/ℓ
	Fathead minnows	100 mg/ℓ

Daphnia:

Dicamba		
LC_{50} (48 h)		120.7 mg/ℓ

Algae:

Dicamba		
EbC_{50} (72h)	*Skeletonema costatum*	1.8 mg/ℓ
ErC_{50} (72 h)	*S. costatum*	>4.1 mg/l
	N. pelliculosa	>3.8 mg/l
	A. flos-aquae	32 mg/l
2,4-D		
ErC_{50} (72 h)	*Pseudokirchneriella subcapitata*	>78 mg/l
	Navicula pelliculosa	>100 mg/l

Birds:

Dicamba		
Acute oral LD_{50}	Bobwhite quail	216 mg/kg
	Mallard ducks	1380 mg/kg
Dietary LD_{50} (8 d)	Mallard ducks and Bobwhite quail	>1000 mg/kg diet
2,4-D		
Acute oral LD_{50}	Bobwhite quail	500 mg/kg
Dietary LD_{50} (96 h)	Bobwhite quail and mallard ducks	>5620 mg/kg diet

Bees:

Dicamba		
LD50 (14 d) (oral and contact)		>100 µg/bee
2,4-D		
Oral		94 µg/bee
Contact		>100 µg/bee

Worms:

Dicamba		
LC_{50} (14 d)	*Eisenia fetida*	>1000 mg/kg soil
2,4-D		
LC_{50} (14 d)	*Eisenia fetida*	350 mg/kg soil

ENVIRONMENTAL EFFECTS
Based on information for the active ingredients:
Dicamba and 2,4-D
Plants:
Dicamba: The degradation rate in plants varies greatly with species. In wheat, the major metabolite is 5-hydroxy-2-methoxy-3,6-dichlorobenzoic acid, whilst 3,6-dichlorosalicylic acid is also a metabolite.
2,4-D: In plants, metabolism involves hydroxylation, decarboxylation, cleavage of the acid side-chain, and ring opening.

Persistence and degradability:
Dicamba: In soil, microbial degradation occurs, the principal metabolite being 3,6-dichlorosalicylic acid. Under conditions amenable to rapid metabolism, DT50 <14 d. Koc 242–2930, depending on soil.
2,4-D: In soil, microbial degradation involves hydroxylation, decarboxylation, cleavage of the acid side-chain, and ring opening. DT50 in soil <7 d. Koc c. 60.
Bio-accumulative potential: Not determined.
Mobility in soil:
Dicamba: Not determined.
2,4-D: Rapid degradation in the 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. 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. Empty containers by inverting the empty container over the spray or mixing tank. Thereafter, rinse the container three times with a volume of water equal to a minimum of one third of that of the container. 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:	1760
Road Transport ADR / ORD:	
Class:	8
Packaging group:	III
UN Proper Shipping Name:	CORROSIVE LIQUID, N.O.S (**Dicamba** 80 g ae/l + **2,4-D** 240 g ae/l)
Maritime Transport IMDG / IMO:	
Class:	8
Packaging group:	III
UN Proper Shipping Name:	CORROSIVE LIQUID, N.O.S (**Dicamba** 80 g ae/l + **2,4-D** 240 g ae/l)
Marine pollutant (Y/N):	**Yes**
Air Transport IATA / ICAO:	
Class:	8
Packaging group:	III
UN Proper Shipping Name:	CORROSIVE LIQUID, N.O.S (**Dicamba** 80 g ae/l + **2,4-D** 240 g ae/l)

Special / Environmental Precautions: Wedge drums tightly to avoid movement. (Product dependent, additional safety suggestions).
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:
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 mL,1,2, 5, 10 and 20 litres plastic containers labelled according to South African regulations and guidelines.
Other hazard statements, abbreviations and explanations:
H302: Harmful if swallowed.
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.