

VILLA CRUX 425 SC

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: CRUX 425 SC
Other identifier: Atrazine/Sulcotrione 425 SC
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:

Bateleur: +27 86 199 9071
 (Client: Villa Crop Protection)

Poisoning:
 Griffon Poison Information Centre +27 82 446 8946
 Western Cape Poisons +27 861 555 777
 Tygerberg Hospital +27 21 931 6129

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	H313
Skin sensitizer	Skin sens. 1	H317
Eye	Eye irrit 2/2A	H319
Inhalation	Acute Tox. 5	H333
Carcinogenicity	Carc. 1B	H350
Reproductive Toxicity	Repr. 2	H361
STOT RE	STOT RE 2	H373
Environment		
Aquatic acute	Aquatic acute 1	H400
Aquatic chronic	Aquatic chronic 1	H410

The most important adverse effects:

Physiochemical effects:

Non known.

Human health effects:

May cause an allergic skin reaction.
 Causes serious eye irritation.
 May cause cancer.
 Suspected of damaging fertility or the unborn child.

Label elements:



Signal word: Danger.

Hazard statements:

H303: May be harmful if swallowed.
 H313: May be harmful in contact with skin.
 H317: May cause an allergic skin reaction.
 H319: Causes serious eye irritation.
 H333: May be harmful if inhaled.
 H350: May cause cancer.
 H361: Suspected of damaging fertility or the unborn child.
 H373: May cause damage to organs through prolonged or repeated exposure.
 H400: Very toxic to aquatic life.
 H410: Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P202: Do not handle until all safety precautions have been read and understood.
 P264: Wash hands and face thoroughly after handling.
 P273: Avoid release into the environment.
 P280: Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.
 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.
 P308/313: If exposed or concerned: Get medical attention.
 P333/313: If skin irritation or rash occurs: Get medical advice.
 P337/313: If eye irritation persists: Get medical advice.
 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: Category 5
 Classification according to WHO: III
 Classification according to GPIC (AI): III

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3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture.

Composition:

Chemical Name	CAS	Conc. (m/v %)	Classification EC 1272/2008
Atrazine Technical	1912-24-9	30 %	Skin Sens. 1 (H317) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Sulcotrione Technical	99105-77-8	12,5 %	Skin Sens. 1A (H317) Repr. 2 (H361) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Wetter	68439-49-6	<5 %	Acute Tox. 4 (H302) Eye Dam. 1 (H318) Aquatic Acute 1 (H400)
Anti-foam	9004-62-0	<1 %	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335)
Anti-freeze	107-21-1	<10 %	Acute Tox. 4 (H302)
Bactericide	50-00-0	<1 %	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Skin Corr. 1B (H314) Skin Sens. 1 (H317) Acute Tox. 3 (H331) Muta. 2 (H341) Carc. 1B (H350)

complaints or symptoms, avoid further exposure and if symptoms persist consult a doctor.

Inhalation: If vapours or mists have been inhaled, move victim to fresh air and remove source of contamination if safe to do so. The patient should be kept under observation. Obtain medical attention if irritation develops.

Skin: Remove contaminated clothing, shoes and leather goods. Wash skin gently and thoroughly with cold water and non-abrasive soap. Obtain medical attention if irritation persists.

Eyes: Flush eyes with clean water for at least 15 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. **Seek medical attention immediately.**

Ingestion: Do not induce vomiting. Do not give anything by mouth. Obtain medical attention immediately.

If the person is alert, rinse mouth thoroughly with water.

Anticipated acute effects: Causes serious eye irritation.

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: Extinguish fires with carbon dioxide, dry powder, or alcohol-resistant foam. Water spray can be used to cool unaffected stock, but avoid water coming into contact with product. Use as little water as possible. Solid water jet may cause spreading.

Unsuitable Extinguishing Media: Solid water jet.

Specific hazards: May produce irritating or poisonous mists or other products of combustion.

Special Fire Fighting Procedures: Remove spectators from surrounding area. Isolate the fire area and evacuate all personnel downwind of the fire. Use a recommended extinguishing agent for the type of surrounding 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.

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

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6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid contact with eyes and skin. 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: Evacuate unprotected personnel and animals. Avoid pollution of waterways.

Environmental Precautions: Prevent spilled product from entering sewers, waterways or ground water. This product is classified to be toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment. Any spillages or uncontrolled discharges into water courses 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: May be harmful if swallowed. Avoid contact with eyes and skin. 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.

Do not apply directly to areas where surface water is present, or to intertidal areas below the mean high water mark. Water used to clean equipment must be disposed of correctly to avoid contamination.

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 a dry, cool and well-ventilated area. Do not store for prolonged periods in direct sunlight. Avoid excessive heat. Not to be stored close to food, feed and water supplies.

Do not contaminated other pesticides and fertilizers.

Incompatible substances and mixtures: Refer to product label.

Packaging material: Plastic containers.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible concentration: No occupational exposure limits is available 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 local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs or other specified exposure limits. 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 poorly ventilated area, use a NIOSH approved air-purifying respirator with cartridges/canisters approved for organic vapours.

Hand Protection: Employee must wear appropriate chemically resistant gloves e.g. nitrile rubber gloves to prevent contact with this mixture.

Eye Protection: Wear chemical resistant goggles or face shield when handling the concentrate and when applying the product.

Skin and Body Protection: The use of protective (impervious) clothing e.g. coveralls is recommended to prevent skin contact with this mixture.

Emergency eyewash: Where there is any possibility that an employee's eyes may be exposed to this mixture; the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

A safety shower should also be at hand in case of emergencies.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Cream white liquid.

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Odour: None.

pH (1% aqueous dilution): 5.4

Melting point: Not available.

Freezing Point: Not available.

Boiling Point: Not available.

Flash Point: None.

Flammability: Non-flammable. Water-base.

Upper/lower explosion limits: Not available.

Vapour Pressure (mm Hg): Not available.

Relative Density: 1.083 g/ml.

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: Product is stable at ambient temperature and pressure, under normal storage and handling conditions. Stable for 2 years under normal warehouse conditions.

Reactivity: None known.

Possibility of Hazardous Reactions: None known.

Conditions to Avoid: None known.

Incompatible Materials: None known.

Hazardous Decomposition Products: None known.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Calculated according to GHS.

Oral LD₅₀ (24 h) rat >4000 mg/kg.

Dermal LD₅₀ (24 h) rat >4500 mg/kg.

Inhalation LC₅₀ (4 h) rat 7,7 mg/l.

Skin Irritation/Corrosion: Not available.

Eye Damage/Irritation: Causes serious eye irritation.

Skin Sensitization: May cause an allergic skin reaction.

Respiratory Sensitization: Not available.

Reproductive cell mutagenicity: Not available.

Carcinogenicity: May cause cancer.

Reproductive toxicity: Suspected of damaging fertility or the unborn child.

Specific target organ toxicity – single exposure: Not available.

Specific target organ toxicity – repeated exposure: May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard: Not available.

Chronic Effects: Not available.

POTENTIAL ADVERSE EFFECTS:

Inhalation: May be harmful if inhaled. May cause damage to organs (kidneys).

Skin contact: May be harmful in contact with the skin. May cause sensitization by skin contact.

Eye contact: Due to inerts this product may cause serious irritation to the eyes. May cause corneal injury.

Ingestion: May be harmful if swallowed.

12. ECOLOGICAL INFORMATION

ECOTOXICITY DATA: Active ingredient

Fish:

Atrazine

LC ₅₀ (96 h)	Rainbow trout	11.0 mg/l.
	Guppies	4.3 mg/l.

Sulcotrione

LC ₅₀ (96)	Rainbow trout	227 mg/l.
	Mirror carp	240 mg/l.

Daphnia:

Atrazine

EC ₅₀ (48 h)		≥29 mg/l.
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Sulcotrione

EC ₅₀ (48 h)		>848 mg/l.
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Algae:

Atrazine

EC ₅₀ (72 h)	<i>Scenedesmus subspicatus</i>	0.043 mg/l.
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EC ₅₀ (96 h)	<i>Pseudokirchneriella subcapitata</i>	0.01 mg/l.
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Sulcotrione

EC ₅₀ (96 h)	<i>Selenastrum capricornutum</i>	3.5 mg/l.
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E _r C ₅₀ (72 h)	<i>Anabaena flos-aquae</i>	54 mg/l.
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Birds:

Atrazine

Acute oral LD ₅₀	Bobwhite quail	940 mg/kg.
	Mallard ducks	>2000 mg/kg.
	Japanese quail	>2000 mg/kg.

Dietary LC ₅₀ (8 d)	Japanese quail	>5000 mg/kg.
	Mallard ducks	>1563 mg/kg.

Sulcotrione

Acute oral LD ₅₀	Bobwhite quail	>2111 mg/kg.
	Mallard ducks	>1350 mg/kg.

Dietary LC ₅₀	Bobwhite quail & Mallard ducks	>5620 mg/kg.
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Bees:

Atrazine

LD ₅₀	(oral)	>97 µg/bee.
	(contact)	>100 µg/bee.

Sulcotrione

LD ₅₀	(oral)	>50 µg/bee.
	(contact)	>200 µg/bee.

Worms:

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Atrazine

LC₅₀ (14 d) *Eisenia foetida* 78 mg/kg soil.

Sulcotrione

LC₅₀ (14 d) *Eisenia foetida* >1000 mg/kg soil.

Plants:

Atrazine

In tolerant plants, atrazine is readily metabolized to hydroxyatrazine and amino acid conjugates, with further decomposition of hydroxyatrazine by degradation of the side-chains and hydrolysis of the resulting amino acids on the ring, together with evolution of CO₂. In sensitive plants, unaltered atrazine accumulates, leading to chlorosis and death.

Sulcotrione

Deactivated by the formation of 2-chloro-4-methylsulfonylbenzoic acid.

ENVIRONMENTAL EFFECTS:

Persistence and degradability:

Atrazine

Main metabolites under all conditions are desethylatrazine and hydroxyatrazine. Field DT₅₀ 16-1174 d (median 38.5 d), the longer values being from cold or dry conditions. In water/sediment system, DT₅₀ 14-20 d in the water and DT₅₀ 35-80 in the whole system. DT₅₀ under groundwater conditions 105->200 d, depending on test system (M. J. Wood *et al.* (1991) In: A Walker (ed.), *Pesticides in soils and water: current perspectives* (BCPC Monograph no. 47, pp. 175-182). K_d 0.2-18 ml/g, K_{oc} 39-173 ml/g; desalkylated metabolites had values similar to those of atrazine (K_d 0.2-8.6 ml/g) whereas hydroxyatrazine (K_d 1.6-390) was much more strongly adsorbed.

Sulcotrione

Rapidly degraded in soil; lab. DT₅₀ 4-90 d; field DT₅₀ 1-11 d. The major metabolite is 2-chloro-4-methylsulfonylbenzoic acid. K_{oc} 17-58. No adverse effects on soil micro-organisms.

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. 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 vapour and 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 drip. Thereafter, rinse the container three times with a volume of water equal to 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. 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.

(Atrazine 300 g/l plus Sulcotrione 125 g/l)

Maritime Transport IMDG/IMO:

Class: 9

Packaging group: III

UN Proper Shipping Name:

Environmentally Hazardous Substance Liquid, N.O.S.

(Atrazine 300 g/l plus Sulcotrione 125 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.

(Atrazine 300 g/l plus Sulcotrione 125 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.

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Chemical Safety Assessment carried out? No

16. OTHER INFORMATION

Packaging: Packed in 1, 5, 10, 20 & 25 litres plastic containers and labelled according to the South African regulations and guidelines.

Additional H-statement (s) (formulants)

H301: Toxic if swallowed.

H302: Harmful if swallowed.

H311: Toxic in contact with skin.

H314: Causes severe skin burns and eye damage.

H315: Causes skin irritation.

H318: Causes serious eye damage.

H331: Toxic if inhaled.

H335: May cause respiratory irritation.

H341: Suspected of causing genetic defects.

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.