

DISRUPT 200 SL

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: DISRUPT 200 SL
Other identifier: Diquat 200 SL
Recommended use: Herbicide
Restrictions on use: Agriculture

Supplier: Villa Crop Protection (Pty) Ltd
Co. Reg. No.: 1992/002474/07
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:
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 Toxicity 5	H303
Dermal	Skin Irritation 2 Skin Sensitisation 1	H315 H317
Eye	Eye Damage 1	H318
Inhalation	Acute Toxicity 4	H332
Specific Target Organ Toxicity Single Exposure	STOT SE 3	H335
Specific Target Organ Toxicity Repeated Exposure	STOT RE 1	H372
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 harmful if swallowed.
Causes skin irritation.
May cause an allergic skin reaction.

Causes serious eye damage.
Harmful if inhaled.
May cause respiratory irritation.
Causes damage to organs through prolonged or repeated exposure.

Label elements:



Signal word: Danger.

Hazard statements:

H303: May be harmful if swallowed.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H318: Causes serious eye damage.
H332: Harmful if inhaled.
H335: May cause respiratory irritation.
H372: Causes 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:

P260: Do not breathe fumes, mist, vapours, and spray.
P264+P265: Wash hands thoroughly after handling. Do not touch eyes.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or 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+P304+P305+P317: IF SWALLOWED, INHALED OR IN EYES: Get medical help.
P302+P352: IF ON SKIN: Wash with plenty of water and non-abrasive soap.
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.
P319: Get medical help if you feel unwell.
P333+P317: If skin irritation or rash occurs: Get medical help.
P362+P364: Take off contaminated clothing and wash it before reuse.
P391: Collect spillage.

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P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.

P501: Dispose of content/container to suitable landfill in accordance with local regulations.

Other hazards: None known.

Toxicity:

Classification according to GHS: Category 4

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture

Composition:

Chemical Name	CAS	Conc. (m/v %)	Classification EC 1272/2008
Diquat dibromide	85-00-7	37.4% (20% Diquat ion)	Acute Toxicity 4 (H302) Skin Irritation 2 (H315) Eye Irritation 2 (H319) Skin Sensitisation 1 (H317) Acute Toxicity 2 (H330) STOT SE 3 (H335) STOT RE 1 (H372) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Polyoxyethylene alkylphenyl ether & Quaternized Polyoxyethylene alkylammonium ether	9016-45-9 & 61791-10-4	<10%	Acute Toxicity 4 (H302) Skin Irritation 2 (H315) Eye Damage 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. Get medical help if you feel unwell.

Inhalation: Remove person from contaminated area to fresh air and assist breathing as needed. **Seek medical attention.**

Skin: Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. **Obtain medical attention if irritation or rash occurs.**

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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: None known.

Anticipated delayed effects:

May be harmful if swallowed.

Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye damage.

Harmful if inhaled.

May cause respiratory irritation.

Most important symptoms/effects: Causes damage to organs through prolonged or repeated exposure.

Most important symptoms / effects: Immediate effects depend on the dose absorbed into the blood and effects may be delayed. Ingestion of small quantities may cause harm and larger quantities may lead to death. Damaged skin will lead to increased absorption rates.

Early signs of poisoning are vomiting and painful mucous membranes in mouth and throat. In severe cases diarrhoea follows and kidney and liver damage may develop 1 to 3 days after exposure. Lung damage can be observed after about 3 days and may lead to death. The concentrate can lead to serious eye damage, sometimes delayed up to 24 hours. Exposure to spray mist may cause nose bleeding and soreness of mouth and throat.

Advice to physician: Rapid treatment is essential.

Wash out the stomach. Give up to 1 litre of a 15 % aqueous suspension of Fuller's Earth, orally or via gastric tube, together with suitable purgative (200 ml of an aqueous solution of mannitol). Repeat the administration of the absorbent plus purgative until absorbent is seen in stools. This should normally take between 4 to 6 hours after start of treatment. Treat symptomatically.

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: Hazard products arising from combustion.

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

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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. 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 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: May be harmful if swallowed. Avoid contact with skin and eyes. Do not breathe fumes, mist, vapours, and spray. 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 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: Plastic containers and drums.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible concentration: No occupational exposure limits have 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 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: Employees must wear chemically protective impervious gloves to prevent against skin contact.

Eye Protection: Employees must wear a face shield to prevent against eye contact. The use of chemical safety goggles is recommended if a face shield is not available. Contact lenses are not protective eye devices.

Skin and Body Protection: Employees must wear appropriate protective impervious clothing, rubber boots, gloves, hat 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

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employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Dark brown liquid.
Odour: Non-specific.
pH (1% aqueous dilution): 4.0 to 8.0.
Melting point: Not available.
Freezing Point: Not available.
Boiling Point: Approx. 100 °C
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: 1.19 g/cm³.
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: 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 LD₅₀ > 2400 mg/kg (rat)
Dermal LD₅₀ > 6000 mg/kg (rat)
Inhalation LC₅₀ (4 h) > 1.5 mg/l (rat).
Skin Irritation: Causes skin irritation.
Eye Irritation: 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: Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard: Not classified.

Chronic Effects: Not available.

POTENTIAL ADVERSE EFFECTS:

Inhalation: Harmful if inhaled.

Skin contact: Causes skin irritation. May cause an allergic skin reaction.

Eye contact: Causes serious eye damage.

Ingestion: May be harmful if swallowed.

12. ECOLOGICAL INFORMATION

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

ECOTOXICITY DATA:

Diquat ion

Fish:

LC₅₀ (96 h) Rainbow trout 6.1 mg/l

Daphnia:

LC₅₀ (48 h) 1.2 mg/l

Algae:

EC₅₀ (96 h) *Pseudokirchneriella subcapitata* 0.011 mg/l

Birds:

Acute oral LD ₅₀	Mallard ducks	71 mg/kg
	Partridges	158 mg/kg
	Zebra finch	30.9 mg/kg
Dietary LC ₅₀	Japanese quail	721 mg/kg diet
	Bobwhite quail	1570 mg/kg diet
	Ring-necked pheasant	2000 mg/kg diet
	Mallard duck	>2680 mg/kg diet

Worms:

LC₅₀ (14 d) Earthworms 94 mg/kg soil.

ENVIRONMENTAL EFFECTS:

Plants: Metabolic breakdown of diquat dibromide is very limited in plants. On plant surfaces, photochemical degradation occurs.

Persistence and degradability: Diquat is rapidly and strongly adsorbed to soil and sediment, resulting in complete deactivation. When adsorbed to soil, diquat is slowly degraded with DT₅₀ values ranging from 1.2 to 41 years. When desorbed it is quickly degraded by soil micro-organisms (DT₅₀ 0.4 – 21 days).

Bio-accumulative Potential: Log K_{ow} -4.6. In rats, following oral administration, only a small proportion was absorbed. The unabsorbed dose was excreted rapidly in faeces, and the absorbed dose extensively and rapidly excreted in urine.

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Mobility in soil: Diquat is rapidly and strongly adsorbed to soil and sediment. The potential risk to leach into groundwater is negligible.

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. 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 (Diquat ion 200 g/l)

Maritime Transport IMDG/IMO:
Class: 9
Packaging group: III
UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (Diquat ion 200 g/l)

Marine Pollutant (Y/N): Yes.

Air Transport IATA/ICAO:
Class: 9
Packaging group: III
UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (Diquat ion 200 g/l)

Special/Environmental Precautions: Wedge drums tightly to avoid movement.

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 5, 20, 25, 50 and 100 litres plastic containers and drums, labelled according to South African regulations and guidelines.

Additional H statements (formulants):

H302: Harmful if swallowed.

H319: Causes serious eye irritation.

H330: Fatal if inhaled.

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.

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.