

## VILLA DISRUPT 200 SL

## MATERIAL SAFETY DATA SHEET

### 1. PRODUCT & COMPANY IDENTIFICATION

**Product Name:** DISRUPT 200 SL  
Herbicide

**UN No.:** 1760

**Supplier:** Villa Crop Protection (Pty) Ltd.  
PO Box 10413,  
Aston Manor, 1630, South Africa

**Telephone:** (011) 396 2233

**Fax:** (011) 396 4777

**Website:** [www.villacrop.co.za](http://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. COMPOSITION/INFORMATION ON INGREDIENTS

**Common Name:** Diquat dibromide

**Chemical Name:** 1, 1'-ethylene-2, 2'-bipyridyldiium dibromide (IUPAC)

**CAS No.:** [85-00-7]; [6385-62-2] for Diquat dibromide monohydrate

**Chemical family:** Bipyridylium

**Chemical formula:** C<sub>12</sub>H<sub>12</sub>Br<sub>2</sub>N<sub>2</sub>

**Molecular weight:** 344.1

**Use:** Non-selective contact herbicide and desiccant, absorbed by the foliage, with some translocation in the xylem.

**Formulation:** Diquat: 200 g/l  
Soluble Liquid

**Active ingredients:** Diquat dibromide – 200 g/l  
Other ingredients – Up to 100 %

**Symbol:** Xn, Xi

**Indication of danger:** Harmful if swallowed.  
Irritant

**Risk Phrases:** R8, R22, R36, R51 / 53

### 3. HAZARD IDENTIFICATION

**Toxicity class:** WHO (a.i.) II; EPA (formulation) II.

**Likely routes of exposure:** Skin contact, ingestion and inhalation.

**Skin:** May cause mild irritation. No adverse effects expected when recommended use instructions are followed.

**Eye contact:** May cause mild eye irritation.

**Ingestion:** Harmful if swallowed.

**Inhalation:** Harmful by inhalation.

### 4. FIRST AID MEASURES AND PRECAUTIONS

**Inhalation:** Remove source of contamination, or move victim to fresh air. Keep affected person warm and at rest. Treat symptomatically and supportively. Qualified personnel should perform administration of oxygen. Get medical attention if effects persist.

**Skin contact:** Move the victim to fresh air and remove all contaminated clothing, shoes and leather goods. Wash affected skin areas gently and thoroughly with water and non-abrasive soap. Do not rub the skin. If irritation persists, seek medical advice.

**Eye contact:** Immediately flush the eyes with clean, gently flowing lukewarm water or saline solution for 15 - 20 minutes, holding the eyelid(s) open. Remove contact lenses, if present, after 5 minutes, then continue rinsing the eye. If irritation persists, seek medical advice.

**Ingestion:** Have the victim sip a glass of water if able to swallow. Do not induce vomiting. Seek medical advice immediately showing container and label.

**Advice to physician:** To be effective, treatment for ingestion must begin IMMEDIATELY. Treatment consists of binding the active ingredient, **Diquat**, in the gut with suspensions of activated charcoal or bentonite clay, administration of cathartics to enhance elimination and removal of **Diquat** from the blood by charcoal hemoperfusion or continuous hemodialysis.

### 5. FIRE FIGHTING MEASURES

**Fire and explosion hazard:** Flash point: N/A.

**Extinguishing agents:** Dry chemical, foam or CO<sub>2</sub> extinguishing media.

**Firefighting:** Wear full protective clothing and self-contained breathing apparatus. Remove spectators from surrounding area. Remove container from fire area if possible. Prevent use of contaminated buildings, area and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff. Contain fire control agents for later disposal. Use a recommended extinguishing agent for the type of surrounding fire. Keep upwind.

**Unusual fire or explosion hazards:** This product may form flammable and explosive hydrogen gas when in contact with aluminium. During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

### 6. ACCIDENTAL RELEASE MEASURES (SPILLAGE)

**Personal precautions:** Avoid contact with skin and eyes. Do not breathe spray or fumes. For personal protection see Section 8.

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**Environmental precautions:** Do not allow entering of drains or watercourses. Spillage or uncontrolled discharges into water courses (or public waters) to be reported immediately to the Police and to the Department of Water/Environmental Affairs.

**Occupational spill:** Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent. Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition. Do not flush spilled material into drains. Keep spectators away.

### 7. HANDLING AND STORAGE REQUIREMENTS

**Handling:** This product reacts with aluminium to produce flammable hydrogen gas. Do not mix or store in containers or systems made of aluminium or having aluminium fittings. Avoid contact with eyes, prolonged contact with skin, and inhalation of spray and fumes. Handle product with caution. Use with adequate ventilation. Wash hands before eating, drinking, chewing gum, smoking or using the toilet. Remove clothing immediately if the herbicide gets inside. Then wash skin thoroughly using a non-abrasive soap and put on clean clothing. Operators should change and wash clothing after use.

**Storage:** Store in its original, labelled and closed container in dry, cool, shaded, well-ventilated area, away from heat, sparks and other sources of ignition. Do not store with other pesticides, fertilizer, seeds, foodstuffs and water supplies. Store away from incompatible substances. Keep out of reach of unauthorized persons, children and animals. Local regulations should be complied with.

### 8. EXPOSURE CONTROL / PERSONAL PROTECTION

It is essential to provide adequate ventilation. The measures appropriate for a particular work site depend on how this material is used and on the extent of exposure. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire and other applicable regulations.

**PERSONAL PROTECTIVE EQUIPMENT:** If engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable personal protective equipment including approved respiratory protection.

**Respirator:** A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits.

**Clothing:** Where contact is likely, wear chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, PVC or Viton), coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.

**Eye protection:** Wear chemical splash goggles.

**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:** Dark Brown Liquid

**Odour:** Non-specific.

**Density:** 1.19 g/cm<sup>3</sup>.

**Solubility in water:** Soluble in water.

**pH:** 4.0 to 8.0.

**Corrosiveness:** Reacts with aluminium.

### 10. STABILITY AND REACTIVITY

**Conditions to Avoid:** Concentrate should not be stored in aluminium containers. Spray solutions should not be mixed, stored or applied in containers other than plastic, plastic-lined steel, stainless steel or fibreglass.

**Polymerisation:** This product will not undergo polymerisation reactions.

**Storage stability:** Stable for 2 years under normal warehouse conditions.

**Incompatibility:** No particular incompatibilities.

**Thermal decomposition:** Flammable hydrogen gas may be formed on contact with aluminium. May decompose at high temperatures forming toxic gases.

### 11. TOXICOLOGICAL INFORMATION

**Acute oral LD<sub>50</sub>:** 1450 mg/kg in rats.

**Acute dermal LD<sub>50</sub>:** > 5 050 mg/kg in rats.

**Inhalation:** LC<sub>50</sub> (4 hours): 0.64 mg/l.

**Acute skin irritation:** Irritant to skin. Not a skin sensitizer.

**Acute eye irritation:** Irritant to eyes.

**Carcinogenicity:** Animal studies did not detect any carcinogenic effects.

### 12. ECOLOGICAL INFORMATION

**Degradability:** Rapidly degraded by soil micro-organisms, DT<sub>50</sub> of unabsorbed **Diquat** < 1 w. Strong binding in soil increases persistence. Strongly bound and inactivated by soil and aquatic sediments and does not leach into groundwater.

**ECOTOXICOLOGY:** (**Diquat dibromide** Technical).

**Birds:**

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LD<sub>50</sub> Mallard ducks: 155 mg/kg.  
LD<sub>50</sub> Partridge: 295 mg/kg.

### Fish: Toxic

LC<sub>50</sub> (96 hours): Rainbow trout: 39 mg/ℓ.  
LC<sub>50</sub> (96 hours): Mirror carp: 125 mg/ℓ.

**Bees: Not toxic.** LD<sub>50</sub> (120 hours) oral: 22 µg/bee

**Daphnia:** LC<sub>50</sub> (48 hours): 2.2 µg/ℓ.

**Earthworms:** LC<sub>50</sub> (14 d): 243 mg/kg.

### 13. DISPOSAL CONSIDERATION

**Pesticide disposal:** Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product that cannot be re-used or reprocessed. Never pour untreated waste or surplus products 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 disposal:** Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is destroyed.

**TRIPLE RINSE** empty containers in the following manner: Invert the empty container over the spray or mixing tank and allow to drain 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 rinsing to the contents of the spray tank before destroying the container in the prescribed manner.

Do not re-use the empty container for any other purpose but destroy it by perforation and flattening and bury in an approved dumpsite. Prevent contamination of food, feedstuffs, drinking water and eating utensils.

Comply with local legislation applying to waste disposal.

### 14. TRANSPORT INFORMATION

**UN NUMBER:** 1760

#### Road Transport ADR/IRD:

Class: 8  
Packing group: III  
Shipping name: Corrosive liquid, N.O.S.

#### Air Transport ICAO/IATA:

Class: 8  
Packing group: III  
Shipping name: Corrosive liquid, N.O.S.

#### Maritime Transport IMDG/IMO:

Class: 8  
Packing group: III  
Shipping name: Corrosive liquid, N.O.S.

### 15. REGULATORY INFORMATION

**Symbol:** Xn, Xi  
**Indication:** Harmful, Irritating & Corrosive.

#### Risk phrases:

**R 8** Contact with combustible material may cause fire.  
**R 22** Harmful if swallowed  
**R 36** Irritating to eyes.  
**R 51/53** Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

#### Safety phrases:

**S 2** Keep out of reach children.  
**S 2425** Avoid contact with skin and eyes.  
**S 36/37/39** Wear suitable protective clothing, gloves and eye/face protection.  
**S 45** In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
**S 61** Avoid release to the environment.

### 16. OTHER INFORMATION

**Packaging:** Packed in 5, 20, 25, 50 & 100 litres plastic containers, labelled according to South African regulations and guidelines.

**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 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

**Compiled:** July 2011  
**Reviewed:** July 2021  
**Revision no.:** (3)  
**Next revision date:** July 2025

For detailed information on revisions, contact the Registration holder.