



Herbicide

# DISRUPT 200 SL

Reg. No. L 9180 Act No. 36 of 1947

4: 18/1/2023 – May 2023

A water-soluble herbicide for the control of annual broadleaf weeds and grasses in crops as listed. Inactivated on contact with soil.

## ACTIVE INGREDIENT

diquat ion (pyridinium)  
*(as dibromide salt)*

200 g/l  
373.5 g/l

GROUP 22 HERBICIDE



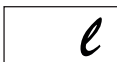
**DANGER**

### Hazard Statements:

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.  
Very toxic to aquatic life with long lasting effects.

### Precautionary Statements:

Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.  
Avoid release into the environment.



UN Number: 3082

Registration holder: VILLA CROP PROTECTION (PTY) LTD.  
Co. Reg. No. 1992/002474/07  
P.O. Box 10413, Aston Manor, 1630  
Tel. (011) 396 2233  
Website: [www.villacrop.co.za](http://www.villacrop.co.za)

**24 HR EMERGENCY NUMBERS:**  
Griffon Poison Centre: +27 82 446 8946  
24 HR Transport / Spill Emergency no: (Hazcall24) +27 86 044 4411  
(Client: Villa Crop Protection)

REFER TO DETAILS AS PRINTED ON CONTAINER / BAG

DIRECTIONS FOR USE ENCLOSED

Batch Number:  
Date of Manufacture:

**DISRUPT 200 SL**

Reg. No. L 9180 Act No. 36 of 1947  
 HRAC HERBICIDE GROUP CODE: 22

**ACTIVE INGREDIENT:**

diquat ion (pyridinium)..... 200 g/l  
 (as dibromide salt)..... 373.5 g/l

Registration holder:

**VILLA CROP PROTECTION (PTY) LTD.**

Co. Reg. No. 1992/002474/07

PO Box 10413, Aston Manor, 1630, Tel. (011) 396 2233

**WARNINGS****Withholding periods:**

Minimum time between the last application and harvest or grazing:	
Canola	10 days
Lucern	10 days
Clover	10 days

**Hazard statements:**

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.
Very toxic to aquatic life with long lasting effects.

- Handle with extreme care.
- Toxic to bees and wildlife.
- Store under lock and key in a cool place, away from food, feeds, seed, fertilizers and other agricultural remedies.
- Keep out of reach of children, uninformed persons and animals.
- Re-entry: Do not enter treated area within two (2) days after treatment unless wearing protective clothing.
- **In case of poisoning call a doctor and make this label available to him/her.**

**Aerial application:**

- Notify all inhabitants in the immediate vicinity of the lands to be sprayed and issue the necessary warnings.
- Do not spray over or allow drift to contaminate water or adjacent areas.

**Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not warrant that it will be efficacious under all conditions, because the action and effect thereof may be affected by factors such as abnormal soil, climatic and storage conditions, quality of dilution water, compatibility with other substances not indicated on the label and the occurrence of resistance of the weeds to the remedy concerned, as well as by the method, time and accuracy of application. The registration holder further does not accept responsibility for damage to crops, vegetation, the environment or harm to man or animal or for lack of performance of the remedy concerned, due to failure of the user to follow the label instructions or to the occurrence of conditions, which could not have been foreseen in terms of the registration. Consult the supplier in event of any uncertainty.**

**PRECAUTIONS****Precautionary statements:**

Do not breathe fumes, mist, vapours, and spray.
Wash hands thoroughly after handling. Do not touch eyes.

Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Avoid release into the environment.
Wear impervious rubber gloves and boots, protective clothing, and chemical safety goggles.
IF SWALLOWED, INHALED OR IN EYES: Get medical help.
IF ON SKIN: Wash with plenty of water and non-abrasive soap.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Get medical help if you feel unwell.
If skin irritation or rash occurs: Get medical help.
Take off contaminated clothing and wash it before reuse.
Collect spillage.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of content/container to suitable landfill in accordance with local regulations.

- Prevent drift onto other crops, grazing, rivers, dams and areas not under treatment or to nearby water sources.
- Thoroughly clean the applicator directly after use and dispose of wash water where it will not contaminate food, grazing, boreholes, rivers or dams.
- **TRIPLE RINSE THE EMPTY CONTAINER AS FOLLOWS:** 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 (3) 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](http://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.
- Prevent contamination of foods, feeds, drinking water and eating utensils.

<b>Relevant hazardous components</b>	
<b>Diquat dibromide salt</b>	375 g/l
Polyoxyethylene alkylphenyl ether & Quaternized Polyoxyethylene alkylamino ether	< 100 g/l

### **SYMPTOMS OF HUMAN POISONING**

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.

### **FIRST AID TREATMENT**

- 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 contact:** 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.**
- **Eye contact:** Flush eyes with clean water for at least 15 to 20 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after five (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.

**NOTE 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.

**RESISTANCE WARNING**

**DISRUPT 200 SL** is a group code 22 herbicide. Any weed population may contain individuals naturally resistant to **DISRUPT 200 SL** and other group code 22 herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds may not be controlled by **DISRUPT 200 SL** or any other group code 22 herbicide.

To delay herbicide resistance:

- avoid exclusive repeated use of herbicides from the same herbicide group code. Alternate or tank mix with products from different herbicide group codes,
- integrate other control methods (chemical, cultural, biological) into weed control programmes.

For specific information on resistance management contact the registration holder of this product.

**Mode of Action:**

**DISRUPT 200 SL** is a group code 22 herbicide, that accepts electrons from photosystem I, resulting in reduction of the herbicide and producing a radical which generates hydroxyl radicals and other reactive oxygen species that destroy unsaturated lipids and chlorophyll. It is a non-selective, contact herbicide and desiccant that is absorbed by the foliage with some translocation in the xylem.

**USE RESTRICTIONS**

- Do not use application equipment or spray pressures which result in the formation of a fine spray mist such as mistblowers, ULV applicators and other similar equipment.
- Do not use muddy water.
- Avoid drift onto adjacent crops as green plant tissue will be damaged by the spray. **Do not spray buds or green parts of any crop.**
- Inconsistent and variable control of weeds, even at high rates, may be experienced due various reasons such as:
  - Stress conditions such as drought, cold or heat stress.
  - Plants with foliage with pronounced waxy layers (e.g., *Portulaca oleracea*, *Chenopodium album*, *Gisekia pharnacoides*).
  - Plants with natural resistance to **Paraquat** based products (e.g., *Commelina benghalensis*, *Ipomoea* spp., *Malva parviflora* and *Conyza bonariensis*).
  - Acquired resistance due to the repeated use of bipyridiliums and/or **Glyphosate** e.g., *Lolium* spp. and *Conyza bonariensis* (confirmed resistance in the RSA).
  - Poor coverage and penetration of exposed leaves (e.g., *Argemone subfusiformis*).
  - Regrowth by plants with bulbs and tubers e.g., *Cyperus* spp.
  - Growth tips protected by leaf sheets covering growth points or surface growth points.
  - Periods of growth during the winter.
  - Poor water quality.
- Follow-up treatments may be required to obtain suppression of deep rooted and perennial weeds like Field bindweed (*Convolvulus arvensis*), Small mallow (*Malva parviflora*), Narrow-leaved ribwort (*Plantago lanceolata*), Sheep sorrel (*Rumex, angiocarpus*).

**DIRECTIONS FOR USE: Use only as directed.****General information:**

- **DISRUPT 200 SL** controls most annual grasses and emerged broadleaf weeds.
- **DISRUPT 200 SL** has no residual action as it is inactivated rapidly on contact with soil.
- **DISRUPT 200 SL** scorches and controls the green plant parts above soil of most annual weeds. Regrowth often happens due to regrowth of sub-soil plant structures (e.g., stolons, rhizomes and/or bulbs).

**Compatibility:**

- **DISRUPT 200 SL** is compatible with **Summit Super/Benefit Plus**, **Villa 51/Wen 51** and **INTERLOCK®** (L 10254 / W 130875 / N-AR 1856).

- The compatibility of **DISRUPT 200 SL** may be influenced by several factors. As factors influencing compatibility may vary, a physical compatibility test must always be performed before such tank mixture is sprayed.
- If **DISRUPT 200 SL** needs to be used in tank mixture combinations with other herbicides, first mix small quantities of the chemicals in the same ratio in which they will be used, separately with water. Add these mixtures together while agitating and check for any signs of incompatibility e.g., flocculation, etc.
- When **DISRUPT 200 SL** is used in conjunction with any other agricultural remedy, adhere to all **WARNINGS, PRECAUTIONS** and **DIRECTIONS FOR USE** mentioned on that label.

### **Mixing instructions**

- Mix the required amount of **DISRUPT 200 SL** with **clean water** in the spray tank.
- For optimal performance add an adjuvant such as **Summit Super** or **Villa 51** and **Interlock®** at the registered rate.

### **Application instructions:**

#### **Ground application:**

- **DISRUPT 200 SL** can be applied with conventional tractor spray equipment or by means of a knapsack sprayer. It is important that the sprayer will be in good working order and calibrated prior to application, to ensure the correct delivery rate per hectare and that even distribution of the spray mixture is obtained over the target area.
- Use a spray boom fitted with flat-fan nozzles.
- Apply in at least 200 litres water per hectare. Use high volume and high dose rate for treatment of dense weed growth situations.

#### **Aerial application:**

Aerial application of **DISRUPT 200 SL** may only be done by a registered aerial application operator using a correctly calibrated, registered aircraft according to the instructions of SANS Code 10118 (Aerial Application of Agricultural Pesticides). Ensure that the spray mixture is distributed evenly over the target area and that the loss of spray material during application is restricted to a minimum. It is therefore essential that the following criteria be met:

- **The use of a suitable drift retardant adjuvant and/or low drift nozzles (e.g., straight stream nozzles) is recommended. In the case of fixed-wing aircraft flying at a speed faster than 130 mph, the maximum deflection angle of the nozzles or spray stream, as measured from a horizontal straight backwards orientation, may not exceed 30 degrees. In the case of slower flying fixed wing aircraft, the maximum deflection angle, as described above, may not exceed 55 degrees.**
- **Volume:** A spray mixture volume of 35 to 45 litres per hectare is recommended. As this product has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy, or be held responsible for any adverse effects if this product is applied aerially at a lower volume rate than recommended above.
- **Droplet coverage:** 35 to 40 droplets per cm<sup>2</sup> must be recovered at the target area.
- **Droplet size:** A droplet spectrum with a VMD of 350 to 400 micron is recommended. Limit the production of fine droplets less than 150 micron (high drift and evaporation potential) to a minimum.
- **Flying height:** Maintain the height of the spray boom at 3 to 4 metres above the target. Do not spray when aircraft dives, is in a climb or when banking.
- Use suitable atomising equipment that will produce the desired droplet size and coverage, but which will ensure the minimum loss of product. The spraying system must produce a droplet spectrum with the lowest possible Relative Span.
- Position all the atomisers within the inner 60 to 75 % of the wingspan to prevent droplets from entering the wingtip vortices.
- The difference in temperature between the wet and dry bulb thermometers, of a whirling hygrometer, should not exceed 8 °C.
- Stop spraying if the wind speed exceeds 15 km per hour.
- Stop spraying under turbulent, unstable and dry conditions during the heat of the day.
- Spraying under temperature inversion conditions (spraying in or above the inversion layer) and/or high humidity conditions (relative humidity 80 % and above) may lead to the following:
  - a) reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage),
  - b) damage to other sensitive crops and/or non-target areas through drifting of the suspended spray cloud away from the target field.

- Ensure that the aerial spray operator knows exactly which fields to spray.

Obtain an assurance from the aerial spray operator that the above requirements will be met, and that relevant data will be compiled in a logbook and kept for future reference.

#### APPLICATION RATES

<i>Crop</i>	<i>Dosage per ha</i>	<i>Remarks</i>
<b>Canola</b> Pre-harvest desiccation	1.175 to 2.350 ℓ / ha	<p><u>Ground Application:</u> Apply in a minimum of 200 litres water per hectare.</p> <p><u>Aerial application:</u> Refer to “<b>Aerial application instructions</b>” above. Apply in 30 to 40 litres per hectare.</p> <p>One application per season is allowed. Harvest should take place no later than ten (10) days after application. Add <b>Villa 51</b> at 0.1 % (100 ml in 100 litres spray mixture) of the spray solution and <b>Interlock®</b> at 200 to 300 ml per hectare.</p> <p>Overall application, ensure good even coverage on the foliage.</p>
<b>Clover</b> Pre-harvest desiccation (Seed crop ONLY)	1.175 to 2.350 ℓ / ha  1.175 ℓ / ha (Use the lower dosage rate on low density plantings)	<p><u>Ground Application:</u> Apply in a minimum of 200 litres water per hectare.</p> <p><u>Aerial application:</u> Refer to “<b>Aerial application instructions</b>” above. Apply in 30 to 40 litres per hectare. Desiccation will be finished in 3 to 10 days. <b>DO NOT</b> feed or let livestock feed on the treated forage. <b>DO NOT</b> use seeds from treated plants as food. Overall application, ensure good even coverage on the foliage. Add <b>Villa 51</b> at 0.1 % (100 ml in 100 litres spray mixture) of the spray solution and <b>Interlock®</b> at 200 to 300 ml per hectare.</p>
<b>Lucerne</b> Pre-harvest desiccation (Seed crop ONLY)	1.175 to 2.350 ℓ / ha	<p><u>Ground Application:</u> Apply in a minimum of 200 litres water per hectare.</p> <p><u>Aerial application:</u> Refer to “<b>Aerial application instructions</b>” above. Apply in 30 to 40 litres per hectare. Desiccation will be finished in 3 to 10 days. <b>DO NOT</b> feed or let livestock feed on the treated forage. <b>DO NOT</b> use seeds from treated plants as food. Overall application, ensure good even coverage on the foliage. Add <b>Villa 51</b> at 0.1 % (100 ml in 100 litres spray mixture) of the spray solution and <b>Interlock®</b> at 200 to 300 ml per hectare.</p>

<b>Crop</b>	<b>Dosage per ha</b>	<b>Remarks</b>
<b><u>Vineyards,</u></b> <b><u>Deciduous fruit</u></b>	1.5 to 5.0 ℓ in 200 to 750 litres water / ha	Control of annual broadleaf weeds, including <i>Arctotheca calendula</i> (Cape marigold). Vineyards – apply as an overall application before bud burst and thereafter as a directed spray. Dosage rate depends on weed density, growth stage and vigour. Apply at higher volumes and dosage rates in dense weed situations. Add <b>Summit Super</b> at 0.3 % (300 mℓ in 100 litres spray mixture) or <b>Villa 51</b> at 0.05 % (50 mℓ in 100 litres spray mixture) of the spray solution and <b>Interlock®</b> at 200 to 300 mℓ per hectare.
<b><u>Sunflowers</u></b> <b>Desiccation</b>	1.5 litres / ha	<u>Aerial application:</u> Refer to <b>Aerial application instructions</b> above. Apply in 30 to 40 litres per hectare. Add <b>Summit Super</b> at 0.3 % (300 mℓ in 100 litres spray mixture) or <b>Villa 51</b> at 0.05 % (50 mℓ in 100 litres spray mixture) to the spray solution and <b>Interlock®</b> at 200 to 300 mℓ per hectare. Application should be done when the moisture of the sunflowers is between 30 to 40 % OR when the peripheral bracts on the sunflower heads are brown and becoming brittle. Ensure good even coverage on the foliage.
<b><u>Potatoes</u></b> <b>Haulm destruction</b>	2.0 to 5.0 litres / ha	Use 500 to 1000 litres water per hectare. Do not apply if haulms show signs of wilting, as tuber damage may occur. Spray <b>ONLY</b> if at least five (5) hours sunshine is expected. Ensure good even coverage on the foliage. Add <b>Summit Super</b> at 0.3 % (300 mℓ in 100 litres spray mixture) or <b>Villa 51</b> at 0.05 % (50 mℓ in 100 litres spray mixture) of the spray solution.

**WEEDS CONTROLLED**

(Also refer to “**USE RESTRICTIONS**” above).

- **DISRUPT 200 SL** controls most annual emerged broadleaf weeds including Cape Marigold (*Arctotheca calendula*) and Mush heron’s bill (*Erodium moschatum*).
- The following weeds are only controlled **partially (re-growth will occur)**:
  - Perennial grasses and broadleaf weeds.
  - *Chenopodium album* control can be variable.

Consult the **SUMMIT SUPER**, **INTERLOCK®** and **VILLA 51** labels for **WARNINGS**, **PRECAUTIONS**, **USE RESTRICTIONS** and **DIRECTIONS FOR USE**.

The following products mentioned in this label may be replaced with equivalent products listed below:

- **SUMMIT SUPER** (L 8539) = **BENEFIT PLUS** (L 8538) and
- **VILLA 51** (L 8050 / W 130454 / N-AR 1090) = **WEN 51** (L 8315).

**BENEFIT PLUS** and **SUMMIT SUPER** are registered products of **VILLA CROP PROTECTION (PTY) LTD.**

**VILLA 51** and **WEN 51** are registered products of **UNIVERSAL CROP PROTECTION (PTY) LTD.**

**INTERLOCK®** is a registered trademark of **WINFIELD SOLUTIONS, LLC.**