

## ZEONA 840 WDG

## SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** ZEONA 840 WDG  
**Other identifier:** Diclosulam 840 WDG  
**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) 3962233  
**Fax:** (011) 3964666  
**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. HAZARDS IDENTIFICATION

| UN GHS, Regulation EC 1272/2008 [EU-GHS/CLP] EU & SANS 10234:2008 |                   |              |
|---|-------------------|--------------|
| Hazard classes  | Hazard categories | H-statements |
| <b>Health</b>   |                   |              |
| Dermal  | Acute Tox.5       | H313         |
| Aquatic Acute   | Aquatic Acute 1   | H400         |
| Aquatic Chronic   | Aquatic Chronic 1 | H410         |

**The most important adverse effects:**

**Physicochemical effects:**

None known.

**Human health effects:**

None known.

**Label elements:**



**Signal word:** Warning.

**Hazard statements:**

H313: May be harmful in contact with skin.  
 H400: Very toxic to aquatic life.  
 H410: Very toxic to aquatic life with long lasting effects.

**Precautionary statements:**

P273: Avoid release into the environment.  
 P391: Collect spillage.  
 P501: Dispose of contents/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: Cat. 5

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

**Substance/Mixture:** Mixture.

**Composition:**

| Chemical Name | CAS         | Conc. (m/m %) | Classification EC 1272/2008                        |
|---------------|-------------|---------------|--|
| Diclosulam    | 145701-21-9 | 84 %          | Aquatic Acute 1 (H400)<br>Aquatic Chronic 1 (H410) |

### 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.

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

**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 persists.

**Eyes:** Flush eyes with clean water for at least 15 to 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:**

May be harmful in contact with skin.

**Anticipated delayed effects:** None known.

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**Most important symptoms/effects:** None known.  
**Advice to physician** Treat symptomatically and supportively. No specific antidote known.

### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media:** Extinguish fires with carbon dioxide, dry powder, or alcohol-resistant foam.

**Unsuitable Extinguishing Media:** Water. Use water spray or a water jet only to cool heated containers but avoid water coming in contact with the product.

**Specific hazards:** Fire may produce irritating or poisonous vapours or gases (oxides of chlorine and sulphur) 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. 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 skin and eyes. Do not breathe in spray mist or dust. 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 spill product by diking area with sand or earth.

**Methods and Materials for Clean-up:**

Contain spill product by picking up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal. Do not create a powder cloud by using a brush or compressed air. 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. To decontaminate the spill area, tools and equipment, wash with water and suitable detergent. Collect washings and add to the drums already collected. Do not flush spilt material or washings into drains or waterways. See section 13 for disposal considerations.

### 7. HANDLING AND STORAGE

**Handling:**

**Precautions for safe handling:** Avoid contact with skin and eyes. 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.

**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. 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 and bags.

### 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

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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 e.g., PVC is recommended to prevent against skin contact.

**Eye Protection:** The use of chemical safety goggles is recommended to prevent against eye contact. Contact lenses are not protective eye devices.

**Skin and Body Protection:** Employee must wear appropriate protective (impervious) clothing e.g., coveralls, 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 eyewash fountain or appropriate alternative within the immediate work area for emergency use.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Brown, water-dispersing granule.

**Odour:** No distinctive odour.

**pH (1% aqueous dilution):** 5.0 - 8.0

**Melting point:** Not available.

**Freezing Point:** Not available.

**Boiling Point:** Not available.

**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/Relative density:** 0.55 to 0.96 g/cm<sup>3</sup>.

**Solubility:** Disperses 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 2 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:** None known.

**Conditions to Avoid:** Extreme heat or exposure to flames.

**Incompatible Materials:** Avoid contact with strong oxidising materials.

**Hazardous Decomposition Products:** If this product heated in fire, oxides of nitrogen, sulphur and halogen derivatives may be formed.

### 11. TOXICOLOGICAL INFORMATION

**ACUTE TOXICITY:** Calculated according to GHS.

**Oral LD<sub>50</sub> (24 h) rat** >5900 mg/kg.

**Dermal LD<sub>50</sub> (24 h) rat** >2300 mg/kg.

**Inhalation LC<sub>50</sub> (4 h)** 6.0 mg/ℓ.

**Skin Irritation/Corrosion:** Not classified.

**Eye Irritation/Corrosion:** Not classified.

**Skin Sensitization:** Not classified.

**Respiratory Sensitization:** Not available.

**Reproductive cell mutagenicity:** Not classified.

**Carcinogenicity:** Not classified.

**Reproductive toxicity:** Not classified.

**Specific target organ toxicity – single exposure:** Not classified.

**Specific target organ toxicity – repeated exposure:** Not classified.

**Aspiration hazard:** Not classified.

**Chronic Effects:** None known.

**POTENTIAL ADVERSE EFFECTS:**

**Inhalation:** None known.

**Skin contact:** May be harmful in contact with skin

**Eye contact:** None known.

**Ingestion:** None known.

### 12. ECOLOGICAL INFORMATION

**ECOTOXICITY DATA:** Based on the active ingredient.

**Diclosulam.**

**Fish:**

|                         |                    |            |
|-------------------------|--------------------|------------|
| LC <sub>50</sub> (96 h) | Rainbow trout      | >110 mg/ℓ. |
|                         | Bluegill sunfish   | >137 mg/ℓ. |
|                         | Sheepshead minnows | >120 mg/ℓ. |

**Daphnia:**

|                         |  |          |
|-------------------------|--|----------|
| LC <sub>50</sub> (48 h) |  | 72 mg/ℓ. |
|-------------------------|--|----------|

**Algae:**

|                         |   |           |
|-------------------------|---|-----------|
| EC <sub>50</sub> (14 d) | Green algae<br>( <i>Selenastrum capricornutum</i> ) | 1.6 µg/ℓ. |
|                         | Blue-green algae<br>( <i>Anabaena flos-aquae</i> )  | 83 µg/ℓ.  |

**Birds:**

|                             |                                |                   |
|-----------------------------|--------------------------------|-------------------|
| Acute oral LD <sub>50</sub> | Bobwhite quail                 | >2250 mg/kg.      |
| Dietary LC <sub>50</sub>    | Bobwhite quail & Mallard ducks | >5620 mg/kg diet. |

**Bees:**

|  |  |             |
|--|--|-------------|
| (LD <sub>50</sub> µg/bee)<br>(48 h, contact) |  | >25 µg/bee. |
|--|--|-------------|

**Worms:**

|                         |            |                  |
|-------------------------|------------|------------------|
| LC <sub>50</sub> (14 d) | Earthworms | >991 mg/kg soil. |
|-------------------------|------------|------------------|

**Plants:** Not determined.

**ENVIRONMENTAL EFFECTS:** active ingredient.

**Animal:** Metabolised primarily by dealkylation of the ethoxy group and hydrolysis of the sulfonamide linkage.

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**Persistence and degradability:** Dissipation of diclosulam occurs primarily through microbial degradation and is minimally influenced by soil PH. Soil DT<sub>50</sub> (in a wide variety of soils) c. 33-65 d. K<sub>oc</sub> 90. Low application rates and half-life mean diclosulam is not likely to contaminate groundwater.  
**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. Comply with local legislation applying to waste disposal. The product may be taken to a registered waste disposal site or incineration plant.

**Container: 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 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.

### 14. TRANSPORT INFORMATION

**UN Number:** 3077  
**Road Transport ADR/IRD:**  
 Class: 9  
 Packaging group: III  
 UN Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S.  
 (Diclosulam 840 g/kg)

**Maritime Transport IMDG/IMO:**  
 Class: 9  
 Packaging group: III  
 UN Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S.  
 (Diclosulam 840 g/kg)

**Marine Pollutant (Y/N): Yes**  
**Air transport IATA/ICAO:**  
 Class: 9  
 Packaging group: III  
 UN Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S.

(Diclosulam 840 g/kg)

**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:**  
 OHS 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 250, 500 g, 1, 5, 10, 20 and 25 kg plastic containers, 5 and 20 g water-soluble bags and labelled according to the South African regulations and guidelines.

**Additional H-statement (s) (formulants)**  
 None.

**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.