

# VILLA KRESO WDG

# MATERIAL SAFETY DATA SHEET

## 1. IDENTIFICATION OF PRODUCT AND COMPANY

**Product Name:** KRESO WDG  
 Fungicide  
**UN No.** 3077  
**Supplier:** Villa Crop Protection (Pty) Ltd.  
 PO Box 801, Kempton Park  
 1620, 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:

Envirosure. +27 31 205 4918  
 (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

### Villa Crop Protection Emergency number:

#### National Safety, Health and Environmental Manager:

+27 63 698 0668

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

**Common name:** kresoxim-methyl  
**Chemical Name:** methyl (E)-methoxyimino[2-(o-tolyloxymethyl)phenyl]acetate (IUPAC);  
**CAS No.:** [143390-89-0]  
**Chemical Family:** strobilurin type: oximinoacetate  
**Chemical Formula:** C<sub>18</sub>H<sub>19</sub>NO<sub>4</sub>  
**Molecular weight:** 313.4

**Use:** Fungicide with protective, curative, eradivative and long residual disease control; acts by inhibiting spore germination. Redistribution via the vapour phase contributes to activity.

**Formulation:** kresoxim-methyl 500 g/kg  
 Water dispersible granule

### Hazardous ingredients of toxicological concern:

| Inert:          | concern: | % present: |
|-----------------|----------|------------|
| kresoxim-methyl | harmful  | 50 %       |

**Symbol:** Xi; Xn, N

**Indication of danger:** irritant, harmful, environmentally dangerous

**Risk phrases:** R20/21/22, R36/37/38, R51

## 3. HAZARD IDENTIFICATION

### Likely routes of exposure:

**Skin:** May cause irritation and may be absorbed through the skin. Not expected to be a skin sensitizer.

**Eye:** May cause irritation to the eyes, with redness and pain.

**Inhalation:** May cause transitory upper respiratory irritation, irritation and soreness in throat and nose, coughing, sneezing and in severe cases shortness of breath. In extreme exposures congestion may occur.

**Swallowed:** The product is harmful if swallowed. Large oral doses may cause irritation to the gastrointestinal tract, vomiting may occur

**Other Health Hazard Information:** Persons with pre-existing upper respiratory and lung disease such as, bronchitis, emphysema and asthma should take extra care in handling this product.

## 4. FIRST AID MEASURES AND PRECAUTIONS

### Inhalation:

If product has been inhaled, remove the source of contamination or move victim to fresh air. Administer artificial respiration if patient is not breathing; if breathing is laboured give oxygen. Only qualified personnel should administer oxygen. Obtain medical attention for any breathing difficulty.

### Skin contact:

Remove contaminated clothing, shoes and leather goods. Wash skin gently and thoroughly with copious amounts of water and non-abrasive soap for 15 – 20 minutes. Obtain medical attention if irritation develops.

### Eye contact:

Immediately flush eyes with a stream of clean gently flowing water for at least 15 minutes, holding the eyelid(s) open. Remove contact lenses, if present, after the first 5 minutes. Obtain medical attention if irritation develops.

### Ingestion:

Rinse mouth thoroughly with water if person is alert. Have person drink plenty of water if able to swallow. Never give anything by mouth to an unconscious person. Do not induce vomiting, unless instructed to do so by a physician. If vomiting occurs keep head lower than hips to prevent aspiration. **Immediately obtain medical attention.**

### Advice on treatment:

There is no specific antidote available. Treat symptomatically and supportively.

## 5. FIRE FIGHTING MEASURES

**This material is not flammable.**

### Hazardous products of combustion:

Product is not explosive, but dust/air mixture may be explosive in the presence of an ignition source.

Fire may produce irritating and/or toxic vapours, mists or other products of combustion.

### Extinguishing agents:

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Extinguish fires with dry powder/dry chemical extinguisher, water fog, foam, carbon dioxide. Avoid the accumulation of polluted run-off from the site.

### Fire fighting:

Remove spectators from surrounding area. Isolate the fire area and evacuate downwind. Use a recommended extinguishing agent for the type of surrounding fire.

Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Contain fire control agents for later disposal. Avoid inhaling hazardous vapours and fumes from burning materials. Keep upwind.

Remove container from fire area if possible and without risk. Water can be used to cool unaffected containers but must be contained for later disposal.

Dyke fire control water for later disposal. Do not scatter the material. Avoid pollution of waterways.

Contain water used for fire fighting for later disposal. Avoid the accumulation of polluted run-off from the site.

### Personal protective equipment:

Fire may produce irritating and/or toxic vapours, mists or other products of combustion. Fire fighters and others that may be exposed should wear full protective clothing and self-contained breathing apparatus.

## 6. ACCIDENTAL RELEASE MEASURES (SPILLAGE)

### Personal precautions:

Avoid contact with skin and eyes. Do not breathe in spray or fumes. For personal protection see Section 8.

### 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. Considered a Marine Pollutant.

### Occupational spill:

Do not touch spilled material; stop leak if you can do it without risk. Keep out unprotected persons and animals.

**For spills:** Ventilate area of leak or spill. If possible, vacuum clean dust with equipment fitted with HEPA filter. Use dust suppressant such as water if sweeping is necessary. Place the material into a clean, dry container and cover for subsequent disposal. In situations where product comes in contact with water, contain contaminated water for later disposal. Label drums with its content and dispose it in accordance with local regulations. Prevent material from spreading by damming in with absorptive material. Do not flush spilled material into drains. Keep spectators away and upwind.

Open burning or dumping of this material is prohibited.

## 7. HANDLING AND STORAGE REQUIREMENTS

### Handling:

Harmful if in contact with skin and if swallowed. Irritating to eyes and skin. Avoid contact with eyes and skin, and

inhalation of spray and vapour. Use with adequate ventilation. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Operators should change and wash clothing daily. Remove clothing immediately if the pesticide gets inside. Then wash skin thoroughly using a non-abrasive soap and put on clean clothing. Do not apply directly to areas where surface water is present, or to inter-tidal areas below the mean high water mark. Water used to clean equipment must be disposed of correctly to avoid contamination.

### Storage:

Keep out of reach of unauthorised persons, children and animals. Store in its original labelled, tightly closed container in dry, cool and well-ventilated area, away from heat or open flame. Storage temperatures should not exceed 30 °C. Not to be stored next to feeds, food and water supplies. 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.

### Clothing:

Employee must wear appropriate protective (impervious) clothing and equipment to prevent skin contact with this substance. Wear long-sleeved shirt and long pants, chemical resistant foot ware and socks.

### Gloves:

Employee must wear appropriate chemical-resistant and waterproof gloves to prevent contact with this substance.

### Eye protection:

The use of safety goggles, safety glasses or face shield is recommended. If vapour exposure causes eye discomfort a full-face respirator is recommended.

**Emergency eye wash:** 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:

Off-white vermicelli-like granules

### Flammability:

Not flammable.

### Explosive properties:

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Not explosive. **Dust/air mixture** may be explosive in the presence of an ignition source.

**Solubility:**

Dispersible.

**Density:**

541.0 g/l (20 °C)

**pH:**

8.93 (1 % solution)

## 10. STABILITY AND REACTIVITY

**Stability:**

Considered stable under normal temperatures and storage conditions.

**Incompatibility:**

Avoid contact with strong oxidizing agents and strong acids.

**Sensitivity:**

An inert present in the product absorbs moisture from the environment. Should not be stored at temperatures exceeding 30 °C.

**Conditions to avoid:**

Heat, open flame and sources of ignition.

**Corrosiveness:**

Product is not an oxidizer and is not corrosive to metal.

**Hazard polymerization:**

Will not occur.

## 11. TOXICOLOGICAL INFORMATION

**Acute oral LD<sub>50</sub> rats:**

*Kresoxim-methyl Technical:* > 5000 mg/kg

*Calculated (due to inert - only 3.5% present):* >650 mg/kg

**Acute dermal LD<sub>50</sub> rats:**

*Product Calculated* > 2000 mg/kg

**Acute skin irritation:**

*Product Calculated:* mild irritant

**Acute eye irritation:**

*Product Calculated:* mild irritant

**Dermal sensitisation:**

Not a skin sensitizer.

**Teratogenicity:**

No teratogenicity in rats and rabbits.

**Mutagenicity:**

Negative for mutagenicity. Negative in Ames test.

**Carcinogenicity:**

No evidence of carcinogenicity in mice in 18-month feeding study. Two-year feeding study in rats, NOAEL was 36/47 mg/kg (M/F).

**NOEL: (Technical)**

(3 mo) for male rats 2000 ppm (146 mg/kg daily), female rats 500 ppm (43 mg/kg daily).

**ADI: (Technical)**

0.4 mg/kg b.w.

## 12. ECOLOGICAL INFORMATION

**Mobility, Degradability & Accumulation:**

Although it is toxic to aquatic species, exposure tests and ecological studies have shown that there is no danger of permanent damage to aquatic organisms when kresoxim-methyl is used as recommended.

In soil: The DT<sub>90</sub> (lab) is < 3 days. The main metabolite is the corresponding acid.

In water: The DT<sub>50</sub> is 34 days at pH 7, and 7 hours at pH 9.

In animals: Minimal distribution with highest levels in liver. There is very little potential for accumulation and excretion is rapid, with 87-93% excreted within 48 hours. No parent compound in urine, bile or tissues, and 34 metabolites identified in animals.

**ECOTOXICOLOGY:**

**Birds:**

|                          |                                 |              |
|--------------------------|---------------------------------|--------------|
| LD <sub>50</sub> (14 d): | Quail:                          | > 2150 mg/kg |
| LC <sub>50</sub> (8 d)   | Mallard ducks & Bobwhite quail: | > 5000 ppm   |

**Fish: Toxic to fish.**

|                          |                   |            |
|--------------------------|-------------------|------------|
| LC <sub>50</sub> (96 h): | Bluegill sunfish: | 0.499 mg/l |
|                          | Rainbow trout:    | 190 ppb    |

**Daphnia:**

EC<sub>50</sub> (48 h): 0.186 mg/l

**Bees:**

LD<sub>50</sub> (48 h) (contact): > 20 µg/bee

**Earthworm:**

LC<sub>50</sub>: > 937 mg/kg

**Algae:**

EC<sub>50</sub> (0 -72 h): 63 µg/ml

## 13. DISPOSAL CONSIDERATION

**Pesticide disposal:**

Waste resulting from the use of this product 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. If burning of the container is allowed, stay out of smoke. **TRIPLE RINSE** empty bags in the following manner: Invert the empty bag over the spray or mixing tank and shake to empty. Thereafter rinse the container three times. Add the rinsing to the contents of the spray tank before destroying the bag 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

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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:** 3077  
**ADR/IRD:**  
 Class: 9  
 Packaging group: III  
 Shipping name: Environmentally Hazardous Substance, Solid, N.O.S (kresoxim-methyl 50%)

**IMDG/IMO:**  
 Class: 9  
 Packaging group: III  
 Shipping name: Environmentally Hazardous Substance, Solid, N.O.S (kresoxim-methyl 50%)

**ICAO/IATA:**  
 Class: 9  
 Packaging group: III  
 Shipping name: Environmentally Hazardous Substance, Solid, N.O.S (kresoxim-methyl 50%)

Considered a marine pollutant.

## 15. REGULATORY INFORMATION

**Symbol:** Xi; Xn, N  
**Indication of danger:** irritant, harmful, environmentally hazardous

**Risk phrase(s):**  
**R 20/21/22** Harmful by inhalation, in contact with skin and if swallowed.  
**R 36/37/38** Irritating to eyes, respiratory system and skin.  
**R 51** Toxic to aquatic organisms.

**Safety phrases:**  
**S 1/2** Keep locked up and out of reach children.  
**S 13** Keep away from food, drink and animal feeding stuffs.  
**S 23** Do not breathe vapour/spray.  
**S 24/25** Avoid contact with skin and eyes.  
**S 36/37/39** Wear suitable protective clothing, gloves and eye/face protection.  
**S 61** Avoid release to the environment. Refer to special instructions/safety data sheets.

## 16. OTHER INFORMATION

**Packaging:**  
 Packed in 0.5, 1, 5 and 10 kg plastic bags and 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 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.