

# CYCLONE ELITE

# SAFETY DATA SHEET

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** CYCLONE ELITE  
**Other identifier:** Flumetsulam and Sulcotrione 225 SC  
**Recommended use:** Herbicide  
**Restrictions on use:** Agriculture

**Supplier:** Meridian Agrochemical Company.  
**Co. Reg. No.:** 2000/010819/07  
 PO Box 10413,  
 Aston Manor, 1630, South Africa  
**Telephone:** (011) 396 2233  
**Fax:** (011) 396 4666  
**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]<br>EU & SANS 10234:2008 |                         |              |
|--|-------------------------|--------------|
| Hazard classes   | Hazard categories       | H-statements |
| <b>Health</b>  |                         |              |
| Dermal   | Skin irritation 3       | H316         |
|  | Skin sensitization 1    | H317         |
| Carcinogenicity  | Carcinogenicity 1B      | H350         |
| Respiratory sensitization  | Resp.sens.1B            | H334         |
| Reproductive toxicity  | Reproductive toxicity 2 | H361f        |
| Specific Target Organ Toxicity- Repeated exposure                    | STOT RE2                | H373         |
| <b>Environment</b>   |                         |              |
| Aquatic Acute  | Aquatic Acute 1         | H400         |
| Aquatic Chronic  | Aquatic Chronic 1       | H410         |

**The most important adverse effects:**  
**Physiochemical effects:** None known  
**Human health effects:** Causes mild skin irritation.  
 May cause an allergic skin reaction.  
 May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause cancer. Suspected of

damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.

### Label elements:



**Signal word:** Danger.

### Hazard statements:

H316: Causes mild skin irritation.  
 H317: May cause an allergic skin reaction.  
 H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H350: May cause cancer.  
 H361f: Suspected of damaging fertility or the unborn child.  
 H373: May cause 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:

P203: Obtain, read and follow all safety instructions before use.  
 P260: Do not breathe dust, fume, gas, mist, vapours and spray.  
 P261: Avoid breathing dust, fume, gas, mist, vapours and spray (respiratory sensitization).  
 P272: Contaminated work clothing should not be allowed out of the workplace.  
 P273: Avoid release to the environment.  
 P280: Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.  
 P284: In case of inadequate ventilation wear respiratory protection.  
 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.  
 P318: IF exposed or concerned, get medical advice.  
 P319: Get medical help if you feel unwell.  
 P333+P317: If skin irritation or rash occurs: Get medical help.  
 P342+P316: If experiencing respiratory symptoms: Get emergency medical help immediately.  
 P391: Collect spillage.  
 P405: Store locked up.  
 P501: Dispose of contents/container in accordance with local regulations.

### Other hazards:

None known.

### Toxicity:

Classification according to GHS: Not classified.

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### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture.

| Chemical name   | CAS        | Conc. (m/v %) | Classification EC 1272/2008  |
|-----------------|------------|---------------|--|
| Flumetsulam     | 98967-40-9 | <5 %          | Aquatic Acute 1 (H400)<br>Aquatic Chronic 1 (H410)<br>Repr. 2 (H361f)  |
| Sulcotrione     | 99105-77-8 | <30%          | Skin Sens. 1 (H317)<br>Repr.2 (H361_ STOT RE 2 (H373)<br>Aquatic Acute 1 (H400)<br>Aquatic Chronic 1 (H410)  |
| Ethylene glycol | 107-21-1   | <5%           | Acute tox 4 (H302)   |
| Morwet D-425    | N/A        | <5%           | Resp.sens. 1 (H334)<br>Skin irrit.2 (H315)<br>Eye irrit 2B (H320)  |
| Formaldehyde    | 50-00-0    | <1%           | Acute Tox 3 (H301)<br>Acute Tox 3 (H311)<br>Skin Corr. 1B (H314)<br>Skin Sens. 1 (H317)<br>Acute Tox 3 (H331)<br>Muta. 2 (H341)<br>Carc. 1B (H350) |

### 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 if needed. **Get emergency medical help immediately.**

**Skin:** Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap for at least 15 to 20 minutes. Do not rub the skin. **Get medical help if skin irritation or rash occurs.**

**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. Get medical help if irritation persists.

**Ingestion:** Get medical help 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 and give the person a glass of water to drink.

#### Anticipated acute effects:

Causes mild skin irritation. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause cancer.

**Anticipated delayed effects:** Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.

**Most important symptoms / effects:** None known.

**Advice to physician:** Treat symptomatically and supportively. No specific antidote known.

### 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:** On heating toxic fumes, such as sulphur dioxide and oxides of nitrogen may be produced.

**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.

May cause allergy or asthma symptoms or breathing difficulties if inhaled. 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 groundwater.

This product very toxic to aquatic life with long-lasting effects. Any spillages or uncontrolled discharges into watercourses should be reported immediately to the police and the Department of Water / Environmental Affairs.

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**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:** Avoid contact with skin. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Ensure adequate ventilation during handling and use. Do not handle broken packages without protective equipment. Do not do not inhale spray fumes, or mist. 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 product. 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:** HDPE bottle/drum.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Permissible concentration**

| Components   | Exposure limits                      | Type of exposure limit | Source  |
|--------------|--------------------------------------|------------------------|---|
| Formaldehyde | 0.75 ppm (ST) 2 ppm See Section 5217 | TWA                    | <a href="https://www.osha.gov/annotated-pels/table-z-1">https://www.osha.gov/annotated-pels/table-z-1</a> |

**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 gloves to prevent against skin burn.

**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:** Employees must wear appropriate protective (impervious) clothing, (rubber) boots, hat and equipment to prevent repeated or prolonged skin contact with this substance. Do not wear leather clothing

**Emergency eyewash:** Where there is any possibility that an employee's eyes may be exposed to this product, 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:** Tan liquid

**Odour:** Characteristic odour

**Odour threshold:** Not available.

**pH (1% aqueous dilution):** ±3.3 @ 20°C

**Melting point:** Not available.

**Freezing Point:** Not available.

**Boiling Point:** Not available.

**Flash Point:** Not applicable.

**Flammability:** Not flammable & not combustible.

**Upper / lower explosion limits:** Not available.

**Vapour Pressure (mm Hg):** Negligible at normal ambient temperature.

**Relative Vapour Density:** ±1.01

**Density / Relative density:** Not available.

**Solubility:** Suspends in water.

**n-octanol / water partition coefficient:** Not available.

**Auto-ignition temperature:** Not available.

**Decomposition temperature:** Not available.

**Viscosity:** Not available.

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### 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:** None known.

**Conditions to avoid:** Protect from sunlight, open flame, and sources of heat.

**Incompatible materials:** None known.

**Hazardous decomposition products:** On heating, toxic fumes, such as sulphur dioxide and oxides of nitrogen, may be produced.

### 11. TOXICOLOGICAL INFORMATION

#### ACUTE TOXICITY:

Calculated according to GHS

**Oral LD<sub>50</sub> (24h)** > 5000 mg/kg (rat)

**Dermal LD<sub>50</sub> (24h)** >5000 mg/kg (rabbit)

**Inhalation LC<sub>50</sub> (4h)** >5 mg/l (rat)

**Skin corrosion and eye damage:** Causes mild skin irritation.

**Skin Sensitization:** May cause an allergic skin reaction.

**Respiratory Sensitization:** May cause allergy or asthma symptoms or breathing difficulties if inhaled

**Reproductive cell mutagenicity:** Not classified.

**Carcinogenicity:** May cause cancer.

**Reproductive toxicity:** Suspected of damaging fertility or the unborn child.

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

**Specific target organ toxicity – repeated exposure:** May cause damage to organs through prolonged or repeated exposure.

**Aspiration hazard:** Not classified.

**Chronic Effects:** Not classified.

#### POTENTIAL ADVERSE EFFECTS:

**Ingestion:** Do not ingest.

**Skin :** Causes mild skin irritation.

**Eye:** Not classified.

### 12. ECOLOGICAL INFORMATION

This product is expected to be very to aquatic life with long lasting effects.

#### ECOTOXICITY DATA:

##### Flumetsulam

##### Fish:

LC<sub>50</sub> (96 h) Silversides >376 mg/l.

##### Daphnia:

LC<sub>50</sub> (48 h)

|                             |                                  |                   |
|-----------------------------|----------------------------------|-------------------|
| <b>Algae:</b>               | <i>Selenastrum capricornutum</i> | 0.0049mg/l.       |
| EC <sub>50</sub> (72 h)     |                                  |                   |
| <b>Birds:</b>               |                                  |                   |
| Acute oral LD <sub>50</sub> | Bobwhite quail                   | >2250 mg/kg.      |
| Dietary LC <sub>50</sub>    | Bobwhite quail and Mallard ducks | >5620 mg/kg       |
| <b>Bees:</b>                |                                  |                   |
| LD <sub>50</sub>            |                                  | >100 µg/bee       |
| <b>Worms:</b>               |                                  |                   |
| EC <sub>50</sub> (14 d)     | Earthworms                       | >950 mg/kg soil.  |
| <b>Sulcotrione</b>          |                                  |                   |
| <b>Fish:</b>                |                                  |                   |
| LC <sub>50</sub> (96 h)     | Rainbow trout                    | 227 mg/l.         |
|                             | Mirror carp                      | 240 mg/l.         |
| <b>Daphnia:</b>             |                                  |                   |
| EC <sub>50</sub> (48 h)     |                                  | >848 mg/l.        |
| <b>Algae:</b>               | <i>Selenastrum capricornutum</i> | 0.0049mg/l.       |
| EC <sub>50</sub> (72 h)     |                                  |                   |
| <b>Birds:</b>               |                                  |                   |
| Acute oral LD <sub>50</sub> | Mallard ducks                    | >1350 mg/kg.      |
|                             | Bobwhite quail                   | >2111 mg/kg.      |
| Dietary LC <sub>50</sub>    | Mallard ducks and Bobwhite quail | >5620 mg/kg       |
| <b>Bees:</b>                |                                  |                   |
| LD <sub>50</sub> (Oral)     |                                  | 50 µg/bee         |
| LD <sub>50</sub> (Contact)  |                                  | 200 µg/bee        |
| <b>Worms:</b>               |                                  |                   |
| EC <sub>50</sub> (14 d)     | Earthworms                       | >1000 mg/kg soil. |

#### ENVIRONMENTAL EFFECTS

Flumetsulam and Sulcotrione (Active ingredient).

#### Based on information for the active ingredient(s)

**Plants:** Flumetsulam - DT50 in maize 2 h, soybeans 18 h, Chenopodium 131 h. Metabolites depend on the species; 5-hydroxy or 5-methoxy derivatives are common.

Sulcotrione - Deactivated by the formation of 2-chloro-4-methylsulfonylbenzoic acid.

**Persistence and degradability:** Flumetsulam - Availability of flumetsulam in soil is principally dependent upon soil pH and organic matter. Herbicidal activity increases as pH increases and organic matter decreases. DT50 in soil (25 °C, pH ≥7, o.m. <4%; or pH 6–7, o.m. c. 1%) ≤1 mo. DT50 in soil (pH 6–7, o.m. 2–4%) 1–2 mo. Koc 5–182; Kd 0.05–2.4.

Sulcotrione - Rapidly degraded in soil; lab. DT50 4–90 d; field DT50 1–11 d. The major metabolite is 2-chloro-4-methylsulfonylbenzoic acid. Koc 17–58. No adverse effects on soil micro-organisms.

**Bio-accumulative potential:** Not determined.

**Mobility in soil:** Not determined.

**Other adverse effects:** Not determined.

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### 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](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. Observe all labelled safeguards until container is destroyed.

### 14. TRANSPORT INFORMATION

**UN Number:** 3082  
**Road Transport ADR / ORD:**  
 Class: 9  
 Packaging group: III  
 UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (Flumetsulam 25 g/L + Sulcotrione 200 g/l)

**Maritime Transport IMDG / IMO:**  
 Class: 9  
 Packaging group: III  
 UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (Flumetsulam 25 g/L + Sulcotrione 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 (Flumetsulam 25 g/L + Sulcotrione 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 1, 2, 5,10 and 20 litres HDPE bottle/drum containers and labelled according to South African regulations and guidelines.

**Other hazard statements, abbreviations and explanations:**

**H301:** Toxic if swallowed.

**H302:** Harmful if swallowed.

**H311:** Toxic in contact with skin.

**H315:** Causes skin irritation.

**H331:** Toxic if inhaled.

**H341:** Suspected of causing genetic defects.

**IATA:** International Air Transport Association.

**IBC:** International Bulk Chemical.

**ICAO:** International Civil Aviation Organization.

**IMDG:** International Maritime Dangerous Goods

**IMO:** International Maritime Organization.

**LD<sub>50</sub> 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.

**OEL/RL:** Occupational exposure limit-recommended limit.

**TWA:** Time-weighted average – The average exposure over a specified period, usually a nominal eight hours.

**ST/STEL:** Short-term exposure limits.

**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

**Compiled:** May 2012

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For detailed information on revisions, contact the Registration holder.