

CONTEST 360 SL

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF PRODUCT AND COMPANY

Product Name: CONTEST 360 SL
Herbicide
UN No. 3082
Supplier: Villa Crop Protection (Pty) Ltd.
 PO Box 801,
 Kempton Park, 1620,
 South Africa
Telephone: (011) 396 2233
Fax: (011) 396 4666
Website: 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: Clopyralid
 Triclopyr
Chemical Name: 3,6-dichloropyridine-2-carboxylic acid
as the triethylamine salt
 (IUPAC)
 3,5,6-trichloro-2-pyridyloxyacetic acid
as the triethylamine salt
 (IUPAC)
CAS No.: [1702-17-6]
 [55335-06-3]
Chemical Family: Pyridinecarboxylic acid
Chemical Formula: C₆H₃Cl₂NO₂ (Mol. wt.: 192.0)
 C₆H₃Cl₃N₂O₂ (Mol. wt.: 256.5)
Use: Selective systemic herbicide, absorbed by the leaves and roots, with translocation both acropetally and basipetally, and accumulation in meristematic tissue. Exhibits an auxin-type reaction. Acts on cell elongation and respiration.

Selective systemic herbicide, rapidly absorbed by the foliage and roots, with translocation throughout the plant, accumulating in meristematic tissue. Induces auxin-type responses in susceptible species (mainly broad-leaved

weeds, grass weeds being unaffected at normal application rates).

Formulation: Clopyralid & Triclopyr 90 g/l a.e. and 270 g/l a.e.
 Soluble concentrate

Hazardous ingredients of toxicological concern:

Inert:	concern:	% present:
Clopyralid	Severe eye irritant	9 %
Triclopyr	Mild eye irritant	27 %
Other inerts	Severe eye irritant	64 %

Extremely corrosive and destructive to tissue for rabbit

Symbol: N, Xi, Xn

Indication of danger: irritant, harmful, environmentally dangerous, toxic by inhalation & toxic to aquatic organisms

Risk phrases: R 10, R20/21/22, R 36/37, R48, R51/53, R65

3. HAZARD IDENTIFICATION

Toxicity class: WHO II. Slightly hazardous.

Likely routes of exposure: Skin: Skin irritant. Eye: Eye irritant.

Swallowed: The product is harmful if swallowed.

Incompatibility: (Specific materials to avoid) Avoid acid, oxidizing material, halogenated organics, brass, copper, zinc, and aluminium.

Decomposition Hazards: Hydrogen chloride, nitrogen oxides under fire conditions; chlorinated pyridine.

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 supply oxygen. Only qualified personnel should administer oxygen. Immediately obtain medical attention.

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 to 20 minutes. Obtain medical attention if irritation persists.

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

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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

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

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

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

Occupational spill: Avoid breathing mist/vapour and skin contact. Do not touch-spilled material; stop leak if you can do it without risk. Ventilate area. Wear proper protective equipment. Keep out unprotected persons and animals.

For spills: Isolate area and keep unauthorized persons away. Ventilate area of leak or spill. 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 of 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 swallowed. Product may be moderately irritating to eyes and mildly irritating to 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. Thereafter 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 intertidal 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. Do not store next to feed, 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.

Respirator: An approved respirator suitable for protection from mists of pesticides is adequate. Limitations of respirator use specified by the approved agency and the manufacturer must be observed.

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. Wash

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contaminated clothing and clean protective equipment before re-use.

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 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: liquid.

Colour: Light yellow.

Odour: Characteristic

Flammability: Not applicable.

Flash point: Not applicable.

Explosive properties: Not explosive.

Density: 1.14 g/cm³ (20 °C).

pH of 1% aqueous dilution: 8.3.

10. STABILITY AND REACTIVITY

Stability: Stable for up to 2 years when stored in a dry, cool covered warehouse in original, well-labelled containers. Store at low temperature conditions, below 50°C, preferably below 30 °C and not for prolonged periods in direct sunlight. **Incompatibility:** Keep the product in a cool, dry well-ventilated place. Protect from sunlight, open flame and sources of heat. Avoid contact with strong oxidizing agents, strong acids, halogenated organics, brass, copper, zinc, and aluminium.

Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute oral LD₅₀ rats (calculated):
(Triclopyr + Clopyralid) 360 SL > 2061 mg/kg

Acute dermal LD₅₀ rats (calculated):
(Triclopyr + Clopyralid) 360 SL > 4166 mg/kg

Acute inhalation LC₅₀ rats:
Clopyralid Technical: >0.38 mg/ℓ
Triclopyr Technical: > 256 ppm

Acute skin irritation: Non-irritant.

Acute eye irritation: Severe irritant/ moderate corneal injury.

Dermal sensitisation: May cause allergic skin reaction in susceptible individuals. With the dilute mix, no allergic skin reaction is expected.

Teratogenicity: Technical material is not teratogenic.

Mutagenicity: Technical material is not mutagenic.

Carcinogenicity: Technical material is not carcinogenic.

12. ECOLOGICAL INFORMATION

Mobility, Degradability & Accumulation: Clopyralid:

In soil: The major product is CO₂; only traces of one other metabolite have been recorded. In soil, microbial degradation occurs; slow degradation occurs in sterile soil. Aerobic soil degradation depends on initial concentration (DT50 range 7 at 0.0025 ppm to 435 at 2.5 ppm, sandy loam), soil temperature and soil moisture; DT50time for 50% loss; half-life (BBA guidelines) 14–56 d; DT50 time for 50% loss; half-life (USA guidelines) 2–94 d

In animals: In rats, following oral administration, there is rapid and almost quantitative unchanged elimination in the urine.

In plants: **Clopyralid** is not metabolised in plants.

Mobility, Degradability & Accumulation: Triclopyr:

In soil: The main metabolite is 3,5,6-trichloro-2-methoxypyridine. In soil, fairly rapid degradation by microbial activity, DT50time for 50% loss; half-life (ave.) 46 d, depending on soil and climatic conditions. The major degradation product is 3,5,6-trichloro-2-pyridinol.

In animals: In mammals, following oral administration, excretion is primarily via the urine as the unchanged compound. For details of minor urinary metabolites.

In plants: In plants, DT50time for 50% loss; half-life c. 3–10 d. The main metabolite is 3,5,6-trichloro-2-methoxypyridine.

ECOTOXICOLOGY: (BASED ON TECHNICAL)

Birds: Clopyralid

LD ₅₀ :	Bobwhite quail &	> 1465 mg/kg
	Mallard ducks	> 2000 mg/kg

Birds: Triclopyr

LD ₅₀ :	Mallard ducks:	> 1698 mg/kg
LC ₅₀ :	Bobwhite quail:	> 5000 mg/kg

Fish: (Clopyralid)

LC ₅₀ (96h):	Bluegill sunfish	>125.4 mg/ℓ □
	Rainbow trout:	>103.5 mg/ℓ

Fish: (Triclopyr)

LC ₅₀ (96h):	Bluegill sunfish:	> 148 mg/ℓ
	Trout:	> 117 mg/ℓ

Daphnia: (Clopyralid) EC₅₀ (48h): > 225 mg/ℓ

Daphnia: Triclopyr) LC₅₀ (48h):

Daphnia magna: > 133 mg/ℓ

Bees: (Clopyralid)

LD₅₀ (48h) (oral and contact) : >100 µg/bee

Bees: (Triclopyr) LD₅₀ > 100µg/bee

Earthworm: (Clopyralid) LC₅₀ (14d) >1000 mg/kg

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Algae: (Clopyralid) EC₅₀ (96h): > 7.3 mg/ℓ
 Algae: (Triclopyr) EC₅₀ (5d): 45 mg/ℓ

13. DISPOSAL CONSIDERATION

Pesticide disposal: Open dumping or burning of this pesticide is prohibited. 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 containers in the following manner: Invert the empty container over the spray or mixing tank and allow draining 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 a third of the volume 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: 3082
ADR/IRD: Class: 9
 Packaging group: III
 Shipping name: Environmentally Hazardous Substance, Liquid, N.O.S (Clopyralid 90 g/ℓ a.e.+ Triclopyr 270 g/ℓ a.e.)
IMDG/IMO: Class: 9
 Packaging group: III
 Shipping name: Environmentally Hazardous Substance, Liquid, N.O.S (Clopyralid 90 g/ℓ a.e.+ Triclopyr 270 g/ℓ a.e.)
ICAO/IATA: Class: 93.3
 Packaging group: III
 Shipping name: Environmentally Hazardous Substance, Liquid, N.O.S (Clopyralid 90 g/ℓ a.e.+ Triclopyr 270 g/ℓ a.e.)

Considered a marine and fresh water pollutant.

15. REGULATORY INFORMATION

Symbol: N, Xi Xn
Indication of danger: Irritant, harmful, environmentally hazardous

Risk phrase(s):

R 22 Harmful if swallowed.
R 23 Toxic by inhalation.
R 36/37/38 Irritating to eyes, respiratory system and skin.
R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
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 46 If swallowed, seek medical advice immediately and show container or label.
S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

16. OTHER INFORMATION

Packaging: Packed in 1, 5, 10, 20, 25, 50 and 200 litres plastic containers/drums 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 use 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.