CONTEST 360 SL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **CONTEST 360 SL**
Other identifier: **TRICLOPYR + CLOPYRALID 360 SL**
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) 396 2233
Fax: (011) 396 4666
Website: 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
Health		
Oral	Acute Toxicity 5	H303
Dermal	Acute Tox. 5 Skin Irrit. 2 Skin Sens. 1	H313 H315 H317
Eye	Eye Dam. 1	H318
Inhalation	Acute Tox. 4	H332
	STOT SE 3	H335
	STOT RE 2	H373
Environment		
Aquatic Acute	Aquatic Acute 2	H401
Aquatic chronic	Aquatic chronic 2	H411

The most important adverse effects:
Physiochemical effects: None known
Human health effects:
May be harmful if swallowed. (Acute Tox. 5)
May be harmful in contact with skin. (Acute Tox. 5)
Harmful in inhaled. (Acute Tox. 5)

Causes skin irritation. (Skin Irrit. 2)
May cause an allergic skin reaction. (Skin Sens. 1)
Causes serious eye damage. (Eye Dam. 1)
May cause respiratory irritation. (STOT SE 3)
May cause damage to organs (kidneys) through prolonged or repeated exposure. (STOT RE 2)
Label elements:

Signal word: Danger
Hazard statements:
H303: May be harmful if swallowed.
H313: May be harmful in contact with skin.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H318: Causes serious eye damage.
H332: Harmful in inhaled.
H335: May cause respiratory irritation
H373: May cause damage to organs (kidneys) through prolonged or repeated exposure
H401: Toxic to aquatic life
H411: Toxic to aquatic life with long lasting effects.
Precautionary statements:
P260: Do not breathe dust, fume, gas, mist, vapours and spray.
P264+P265: Wash hands and face thoroughly after handling. Do not touch eyes.
P271: Use only outdoors or in a well-ventilated area.
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.
P301+P317: IF SWALLOWED: Get medical help.
P302+P317+P352: IF ON SKIN: Get medical help. Wash with plenty of water and non-abrasive soap.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P354+P338: IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P319: Get medical help if you feel unwell.
P333+P317: If skin irritation or rash occurs: Get medical help.
P362+P364: Take off contaminated clothing and wash it before reuse
P391: Collect spillage.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.
P501: Dispose of contents/container in accordance with local regulations.

Other hazards:
None known.
Toxicity:
Classification according to GHS: Category 4

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture
Composition:

Chemical name	CAS	Conc. (m/v %)	Classification EC 1272/2008
Clopyralid	1702-17-6	28.43%	Eye Dam. 1 (H318)
Triclopyr	55335-06-3	9.38%	Acute Tox. 4 (H302) Skin Sens. 1 (H317) Eye Irrit. 2 (H319) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Calcium dodecyl benzenesulfonate	26264-06-2	< 5 %	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Aquatic Chronic 4 (H413)
Triethylamine	121-44-8	< 5 %	Flam. Liq. 2 (H225) Acute Tox. 4 (H302) Acute Tox. 4 (H312) Skin Corr. 1A (H314) Acute Tox. 4 (H332)

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. **Immediately consult a doctor.**
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 – 20 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. **Seek medical attention.**
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**.
Anticipated acute effects: Causes severe skin burns and serious eye damage.
Anticipated delayed effects: None known.
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: 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.
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. 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

Personal precautions: Avoid contact with skin and eyes. **Do not breathe in spray mist or vapours**. Ventilate area of spill or leak, especially in contained areas. For personal protection see Section 8.

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 toxic to aquatic organisms and causes 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 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: Harmful if swallowed. Avoid contact with skin and eyes. Ensure adequate ventilation during handling and use. Do not handle broken packages without protective equipment. 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 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. 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: Fluorinated plastic containers.

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: Use a NIOSH approved, air-purifying respirator with cartridges / canisters approved for organic vapours.
Protection: The use of chemically protective impervious gloves 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: Employees must wear appropriate protective impervious clothing, rubber boots, hat and equipment to prevent repeated or prolonged skin contact with this substance.
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: Light yellow liquid.
Odour: Characteristic.
Odour threshold: Not available.
pH (1% aqueous dilution): 8.3.
Melting point: Not available.
Freezing Point: Not available.
Boiling Point: Not available.
Flash Point: Not available.
Flammability: Non-Flammable.
Upper / lower explosion limits: Not available.
Vapour Pressure (mm Hg): Not available.
Relative Vapour Density: Not available.
Density / Relative density: 1.14 g/cm3 (20°C).
Solubility: Soluble 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 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: Unlikely to occur.
Conditions to avoid: Extreme heat or exposure to flames
Incompatible materials: Strong oxidizers, strong bases, strong reducing agents.
Hazardous decomposition products: Alcohols. carbon monoxide and carbon dioxide may form under burning conditions or with incomplete combustion.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:
Calculated according to GHS:
Oral LD_{50} 4390.16 mg/kg
Dermal LD_{50} 4153.27 mg/kg
Inhalation LC_{50} 3.13 mg/ℓ
Skin Irritation / Corrosion: Causes skin irritation.
Eye Damage / Irritation: Causes serious eye damage.
Skin Sensitization: May cause an allergic skin reaction.
Respiratory Sensitization: Not classified.
Reproductive cell mutagenicity: Not classified.
Carcinogenicity: Not classified.
Reproductive toxicity: Not classified.
Specific target organ toxicity – single exposure: May cause respiratory irritation.
Specific target organ toxicity – repeated exposure: May cause damage to organs (kidneys) through prolonged or repeated exposure.
Aspiration hazard: Not classified.
Chronic Effects: Not classified.
POTENTIAL ADVERSE EFFECTS:
Inhalation: Harmful if inhaled.
Ingestion: May be harmful if swallowed.
Skin contact: May cause an allergic skin reaction. Causes skin irritation.

12. ECOLOGICAL INFORMATION

This product is a marine pollutant.

ECOTOXICITY DATA:
Active ingredient: Clopyralid & Triclopyr

Fish:

Clopyralid		
LC_{50} (96 h)	Rainbow trout	>103.5 mg/ℓ
	Bluegill sunfish	>125.4 mg/ℓ
Triclopyr		
	Bluegill sunfish	> 148 mg/ℓ
	Rainbow trout	> 117 mg/ℓ

Daphnia:

Clopyralid		
EC_{50} (48 h)		225 mg/ℓ
Triclopyr		
$EC5_0$ (48 h)		225 mg/ℓ

Algae:

Clopyralid		
EC_{50} (96h)	*Selenastrum capricornutum*	> 7.3 mg/ℓ
Triclopyr		
EC_{50} (5d):		45 mg/ℓ

Birds:

Clopyralid		
Acute oral LD_{50}	Bobwhite quail	> 1465 mg/kg
	Mallard ducks	>2000 mg/kg
Triclopyr		
Acute oral LD_{50}	Bobwhite quail	> 5000 mg/kg
	Mallard ducks	>1698 mg/kg

Bees:

Clopyralid	
LD_{50} (48h) (oral and contact)	>100 µg/bee
Triclopyr	
LD_{50}	>100 µg/bee

Worms:

Clopyralid	
LC_{50} (14 d)	>1000 mg/kg

ENVIRONMENTAL EFFECTS

Based on information for the active ingredient:
Clopyralid
Plants: Clopyralid is not metabolised in plants.
Persistence and degradability: The major product is CO_2; only traces of one other metabolite have been recorded. 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; DT50 time for 50% loss; half-life (BBA guidelines) 14–56 d; DT5 0 time for 50% loss; half-life (USA guidelines) 2–94 d.
Bio-accumulative potential: Not determined.
Mobility in soil: In soil, microbial degradation occurs; slow degradation occurs in sterile soil.
Other adverse effects: Not determined.
Triclopyr
Plants: In plants, DT_{50} time for 50% loss; half-life c. 3–10 d. The main metabolite is 3,5,6-trichloro-2-methoxypyridine.

Persistence and degradability: The main metabolite is 3,5,6-trichloro-2-methoxypyridine. The major degradation product is 3,5,6-trichloro-2-pyridinol.
Bio-accumulative potential: Not determined
Mobility in soil: In soil, fairly rapid degradation by microbial activity, DT50time for 50% loss; half-life (ave.) 46 d, depending on soil and climatic conditions.
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: Container: Emptied containers retain product residues. Do not re-use the empty container for any other purpose. **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. 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 (**Clopyralid** 90 g/ℓ *a.e.*+ **Triclopyr** 270 g/ℓ a.e.)
Maritime Transport IMDG / IMO:	
Class:	9
Packaging group:	III
UN Proper Shipping Name:	Environmentally Hazardous Substance, Liquid, N.O.S (**Clopyralid** 90 g/ℓ *a.e.*+ **Triclopyr** 270 g/ℓ a.e.)
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 (Clopyralid 90 g/l a.e.+ Triclopyr 270 g/l a.e.)

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, 5, 10, 20 and 25 litres fluorinated plastic containers, labelled according to South African regulations and guidelines.
Other hazard statements, abbreviations and explanations:
H225: Highly flammable liquid and vapour.
H302: Harmful if swallowed.
H312: Harmful in contact with skin.
H319: Causes serious eye irritation.
H332: Harmful if inhaled.
H413: May cause long-lasting harmful effects to aquatic life.
IATA: International Air Transport Association.
IBC: International Bulk Chemical.
ICAO: International Civil Aviation Organization.
IMDG: International Maritime Dangerous Goods
IMO: International Maritime Organization.
LD_{50} 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

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For detailed information on revisions, contact the Registration holder.