ULTIMA 240 EC SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **ULTIMA 240 EC**
Other identifier: Clodinafop-propargyl 240 EC
Recommended use: Herbicide
Restrictions on use: Agriculture

Registration holder: **Universal Crop Protection (Pty) Ltd.**
Co. Reg. No.: 1983/008184/07
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:
(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
Skin	Skin Irritant 3	H316
	Skin Sensitizer 1	H317
Eye	Eye Damage 1	H318
Inhalation	Aspiration Tox. 1	H304
	Acute Toxicity 3	H331
Single Target Organ Toxicity – Repeat Exposure	STOT RE 2	H373
Environment		
Aquatic Acute	Aquatic Acute 1	H400
Aquatic Chronic	Aquatic Chronic 1	H410

The most important adverse effects:
Physiochemical effects: None known.
Human health effects: Toxic if inhaled. May be harmful if swallowed. May be fatal if swallowed and enters airways. Causes mild skin irritation and may cause and allergic skin reaction. Causes serious eye damage. May cause damage to organs through prolonged or repeated exposure.

Label elements:

Signal word: Danger
Hazard statements:
H303: May be harmful if swallowed.
H304: May be fatal if swallowed and enters airways.
H316: Causes mild skin irritation.
H317: May cause an allergic skin reaction.
H318: Causes serious eye damage.
H331: Toxic if inhaled.
H373: May cause damage to organs through prolonged or repeated exposure.
H410: Very toxic to aquatic life with long lasting effects.
Precautionary statements:
P261: Avoid breathing dust, fumes, mists, gas, vapours or 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+P316: IF SWALLOWED: Get emergency medical help immediately.
P302+P352: IF ON SKIN: Wash with plenty of water and non-abrasive soap.
P304+P340+P316: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get emergency medical help immediately.
P305+P354+P338+P317: IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical help.
P333+P317: If skin irritation or rash occurs: get medical help.
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 3.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture.

Chemical name	CAS	Conc. (m/v %)	Classification EC 1272/2008
Clodinafop-propargyl	105512-06-9	24%	Acute Tox. 4 (H302) Skin Sens. 1 (H317) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Cloquintocet-mexyl	99607-70-2	<7%	Skin Sens. 1 (H317) Acute Tox. 4 (H332) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Gamma butyrolacetone	96-48-0	<10%	Acute Tox. 4 (H302) Eye Dam. 1 (H318) STOT SE 3 (H336)
Phenylsulfonate CA	68953-96-8	<7%	Aqute Tox. 4 (H312) Skin Irrit. 2 (H315) Eye Dam 1 (H318) Aquatic Chronic 2 (H411)
Heavy aromatic hydrocarbon	64742-94-5	<60%	Asp. Tox 1 (H304)

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: The airway must be kept clear in order to maintain respiration, especially when the patient is unconscious or has vomited. Do NOT induce vomiting due to aspiration hazard. Remove patient to fresh air. Loosen clothing around neck. Lie down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear, apply resuscitation and administer oxygen. Get emergency medical help immediately.
Skin: Immediately remove contaminated clothing, shoes and leather goods. Gently wipe off excess chemical and flush body and clothes with large amounts of water and non-abrasive soap for at least 15-20 minutes. Wash contaminated clothing before re-use. Persons who become sensitised may require specialised medical management with anti-inflammatory agents. Get medical assistance immediately.
Eyes: Immediately rinse with water for at least 15 – 20 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. Get emergency medical help immediately.
Ingestion: Never give anything by mouth to an unconscious person. If swallowed do NOT induce vomiting. A glass of water may be given to sip. For advice, contact the Poisons Information Centre. Seek medical assistance immediately.
Anticipated acute effects: Toxic if inhaled. May be harmful if swallowed. May be fatal if swallowed and enters airways. Causes mild skin irritation and may cause and allergic skin reaction. Causes serious eye damage.
Anticipated delayed effects: May cause damage to organs through prolonged or repeated exposure.
Most important symptoms / effects: Toxic if inhaled.
Advice to physician: No antidote is known. Treat symptomatically and supportively as and when needed. If the product is aspirated into the lungs during ingestion or vomiting, mild to severe chemical pneumonia may be caused. Gastric lavage or administration of activated charcoal with water may be indicated.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Use water spray, carbon dioxide, dry chemical extinguisher or foam to extinguish fire.
Unsuitable Extinguishing Media: High volume water jet due to contamination risk. Use a water jet only to cool heated containers.
Specific hazards: On heating toxic fumes, such as oxides of carbon and nitrogen and other toxic fumes 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 eyes and skin. 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 harmful 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.
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 eyes and skin. 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 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. 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: Fluorinated plastic bottle/drum.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible concentration:
Not available.
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: 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: Employees must wear safety goggles and face-shield to prevent against eye contact. Contact lenses are not protective eye devices.
Skin and Body Protection: Employees must wear appropriate protective clothing, boots, hat 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 eye wash fountain or appropriate alternative within the immediate work area for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Light brown colour.
Odour: Characteristic.
Odour threshold: Not available.
pH (1% aqueous dilution): 6.5 @ 20^0C
Melting point: Not available.
Freezing Point: Not available.
Boiling Point: Not available.
Flash Point: No data available.
Flammability: Not flammable.
Upper / lower explosion limits: Not available.
Vapour Pressure (mm Hg): Not available.
Relative Vapour Density: Not available.
Density / Relative density: Not available.
Solubility: 0.997 g/ℓ at 20 °C.
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: None known.
Conditions to avoid: Protect from sunlight, open flame, and sources of heat.

Incompatible materials: Avoid strong oxidizers, strong acids and strong bases.
Hazardous decomposition products: On heating, toxic fumes, such as oxides of carbon and nitrogen, may be produced.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:
Calculated according to GHS
Oral LD_{50} (24h) 4700 mg/kg
Dermal LD_{50} (24h) 5000 mg/kg
Inhalation LC_{50} (4h) 0.98 mg/ℓ
Skin corrosion and eye damage: Causes mild skin 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: Not classified.
Specific target organ toxicity – repeated exposure: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard: May be fatal if swallowed and enters airways.
Chronic Effects: Not classified.
POTENTIAL ADVERSE EFFECTS:
Ingestion: Toxic if inhaled.
Skin and eye contact: Causes an allergic skin reaction and serious eye damage.

12. ECOLOGICAL INFORMATION

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

ECOTOXICITY DATA:
Based on technical material information:

Fish:		
LC_{50} (96 h)	rainbow trout	0.39 mg/ℓ
	carp	0.46 mg/ℓ
	catfish	0.43 mg/ℓ
Daphnia:		
LC_{50} (48 h)		>74 mg/ℓ
Algae:	*Scenedesmus subspicatus*	25 mg/ℓ
EC_{50} (96 h)		
Birds:		
LD_{50} (8 d)	bobwhite quail	>1455 mg/kg.
	mallard ducks	>2000 mg/kg.
Bees:		
LD_{50} (contact) (48 h)		>100 µg/bee.
LD_{50} (oral) (48 h)		>100 µg/bee
Worms: LC_{50}	Earthworms	210 mg/kg soil.

ENVIRONMENTAL EFFECTS

Based on technical material information:
Plants: In plants, rapidly degraded to the acid derivative as major metabolite.
Persistence and degradability: In soil, undergoes rapid degradation to the free acid (DT_{50} <2 h) and then further to phenyl and pyridine moieties which are bound to the soil and mineralised. The free acid is mobile in soil but is further degraded with DT_{50} 5 – 20 d..
Bio-accumulative potential: Not determined.
Mobility in soil: In practice there is a negligible leaching potential.
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: 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). 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: **2902**
Road Transport ADR / ORD:
Class: 6.1
Packaging group: II
UN Proper Shipping Name: PESTICIDE, LIQUID, TOXIC, N.O.S. (**Clodinafop-propargyl** 240 g/ℓ)
Maritime Transport IMDG / IMO:
Class: 6.1
Packaging group: II
UN Proper Shipping Name: PESTICIDE, LIQUID, TOXIC, N.O.S. (**Clodinafop-propargyl** 240 g/ℓ)
Marine pollutant (Y/N): Yes

Air Transport IATA / ICAO:
Class: 6.1
Packaging group: II
UN Proper Shipping Name: PESTICIDE, LIQUID, TOXIC, N.O.S. (**Clodinafop-propargyl** 240 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 250 ml, 500 ml, 1, 5, 10, and 20 litres plastic fluorinated containers and labelled according to South African regulations and guidelines.

Other hazard statements, abbreviations and explanations:
H302: Harmful if swallowed.
H312: Harmful in contact with skin.
H315: Causes skin irritation.
H332: Harmful if inhaled.
H336: May cause drowsiness or dizziness.
H411: Toxic to aquatic life with long lasting effects.
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.

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For detailed information on revisions, contact the Registration holder.