

UNIVERSAL UNIZONE 750 WDG

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE

Product name: UNIZONE 750 WDG
 Herbicide
UN No.: 3077
Company: 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:
 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: Hexazinone
Chemical Name: 3-cyclohexyl-6-dimethylamino-1-methyl-1,3,5-triazine-2,4-(1H,3H)-dione (IUPAC)
CAS No.: [51235-04-2]
Chemical Family: 1,2,4-triazinone
Chemical Formula: C₁₂H₂₀N₄O₂
Molecular weight: 252.3
Use: Herbicide
Formulation: wettable powder granule
Hazardous ingredients of toxicological concern:

Inert:	concern:	% present:
Hexazinone	severe eye irritant	76.53 %

Symbols: Xi, Xn, N
Risk-phrase(s): R 22, R 36; R 41, R 51/R 53

3. HAZARD IDENTIFICATION

Toxicity class: WHO III (a.i), EPA II.
Likely routes of exposure: Skin and eye contact, ingestion and inhalation.
Eye contact: Direct contact with the product may cause irreversible eye damage.

Skin contact: Significant skin permeation and systemic toxicity after contact appears unlikely. May cause skin irritation with discomfort or rash.
Ingestion: Harmful if swallowed. Ingestion may include abnormal liver function.
Inhalation: The product is not likely to be hazardous by inhalation.
Overexposure: Overexposure to **Hexazinone** by eye contact may initially include eye irritation with discomfort, tearing or blurring of vision. Individuals with pre-existing diseases of the liver may have increased susceptibility to the toxicity of excessive exposures.

4. FIRST AID MEASURES AND PRECAUTIONS

Inhalation: Move the victim to fresh air or remove source of contamination. Keep person warm and calm. Treat symptomatically and supportively as and when required. Only qualified personnel should administer oxygen. Get medical attention immediately if necessary.
Skin contact: Move the victim to fresh air and remove all contaminated clothing, shoes and leather goods. Gently wipe off excess chemical. Wash affected skin areas gently and thoroughly with water and non-abrasive soap. Do not rub the skin. If irritation persists, seek medical advice. Persons who become sensitized may require specialized medical management with anti-inflammatory agents or cortisone-containing emulsions.
Eye contact: Immediately flush the contaminated eyes with gently flowing lukewarm water for 15 to 20 minutes, occasionally lifting the upper and lower lids. If irritation persists, seek medical advice.
Ingestion: Have victim rinse mouth thoroughly with water. Do not induce vomiting. In serious cases, seek medical advice immediately.
Advice to physician: An antidote is neither known nor needed. Treat symptomatically when required. Probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE FIGHTING MEASURES

Fire and explosion hazard: There is no fire or explosion hazard.
Extinguishing agents: Extinguish small fires with carbon dioxide, dry powder, or alcohol-resistant foam. Water spray can be used for larger fires or cooling of unaffected stock, but avoid the accumulation of polluted run-off from the site.
Firefighting: Remove container from fire area if possible. Contain fire control water for later disposal. Use a recommended extinguishing agent for the type of surrounding fire. Avoid inhaling hazardous vapours. Keep upwind.

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Personal protective equipment: Fire may produce irritating or poisonous vapours (hydrogen chloride and toxic oxides of nitrogen), 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: Do not breathe in dusts or fumes. Avoid contact with skin and eyes. For personal protection see Section 8 and see section 4 regarding First Aid Measures when exposed to material during clean-up operations.

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.

Occupational spill: Remove all sources of flames and sparks. For dry spills, shovel up and sweep up with damp earth or sand or other suitable absorbents, taking care not to raise a dust cloud. Place the material into a labelled, clean, dry container and cover for subsequent disposal; and store in a safe place to await proper disposal. All contaminated cleaning materials should be placed in closable receptacles. In situations where product comes in contact with water, contain contaminated water for later disposal. Do not flush spilled material into drains. Do not contaminate water while cleaning equipment or disposing of wastes. Keep spectators away and upwind.

7. HANDLING AND STORAGE REQUIREMENTS

Handling: Wear appropriate protective equipment when handling the product. Do not handle material near food, feed or drinking water. Avoid contact with eyes or prolonged contact with skin. Wash hands before eating, drinking, chewing gum, smoking or using the toilet. Remove clothing immediately if the product 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 intertidal areas below the mean high water mark. Water used to clean equipment must be disposed of correctly to avoid contamination. Local regulations should be complied with.

Storage: Store the product in its original labelled container in cool, dry, well-ventilated area, away from heat, sparks and other sources of ignition. No smoking is allowed. Do not store next to food, feed and water supplies. Keep out of reach of unauthorized persons, children and animals. Avoid breaking the containers, spillage or leaks. Comply with the local regulations.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

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:

Respirator: Wear an approved full-face respirator suitable for protection from dusts and mists of pesticides. Limitations of respirator use, specified by the approving agency and the manufacturer, must be observed.

Clothing: Wear appropriate chemical-resistant protective clothing or other impervious clothing. Wear boots, hat and equipment to prevent repeated or prolonged skin contact with this substance. Do not wear leather clothing. Wash clothing after use, separately from other laundry. Discard clothing and other absorbent material that have been drenched or heavily contaminated with concentrate. Do not re-use.

Gloves: Wear appropriate chemical-resistant protective gloves whenever the product is handled to prevent contact with this substance. Wash gloves after use.

Eye protection: Use safety goggles and face-shield that is compatible with respiratory equipment.

Emergency eye wash: Where there is any possibility that an employee's eyes may be exposed to this substance, an eye wash fountain or appropriate alternative within the immediate work area for emergency use, must be provided.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Light to caramel coloured granules.

Odour: No significant odour.

Corrosiveness: Corrosive.

Flash point: Not flammable.

pH: 5.0 to 9.0.

Storage stability: Stable for 2 years under normal, dry storage conditions.

Solubility in water: Dispersible.

10. STABILITY AND REACTIVITY

Storage 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: Not compatible with strong bases. Always perform a compatibility test before using with other products. Do not physically mix concentrate directly with other herbicide concentrates, always dilute first.

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Decomposition: Decomposition will not occur.
Polymerization: Product will not undergo polymerisation.

resulting from the use of this product may be disposed of at an approved waste disposal facility. 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.

11. TOXICOLOGICAL INFORMATION

Acute oral LD₅₀: 1333 mg/kg in rats (calculated).
Acute dermal LD₅₀: > 5000 mg/kg in rats (technical).
Acute inhalation LC₅₀: >7.48 mg/L in rats (technical).
Skin irritation: This product is considered to be a slight skin irritant. Product is not a skin sensitizer in tests on guinea pigs.
Eye irritation: In tests with rabbits, product caused conjunctival chemosis, conjunctival redness and corneal opacity. Positive irritant effects were present in 1 rabbit 21 days after treatment.
Carcinogenicity: None of the components present in this material at concentrations equal to or greater than 0.1% is listed by IARC, NTP, OSHA or ACGIH as a carcinogen. It is unlikely to be carcinogenic to humans under normal circumstances.
Mutagenicity: Not mutagenic in Ames bacterial assay, Chinese hamster ovary cell point mutation assay, or rat liver DNA repair assay. Positive in the *in vitro* Chinese hamster ovary cell cytogenic assay, but negative in the *in vivo* rat bone marrow cytogenic assay.
Teratogenicity: Not teratogenic or embryo-fetal toxic to rats by dietary administration at levels as high as 5000 ppm, the highest dose tested.
Acceptable Daily Intake (ADI): 0.05 mg/kg b.w. based on technical.

Comply with local legislation applying to waste disposal.
Package product wastes: Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is destroyed. Empty the container of excess product into the container of the applicator. Destroy the emptied containers by perforation and flattening. Bury in an approved, designated landfill. Do not re-use the empty container for any other purpose. Do not burn the empty container.

Comply with any local legislation applying to disposal.

12. ECOLOGICAL INFORMATION

Degradability: Microbial degradation of **Hexazinone** occurs in soil and natural waters. The triazinone ring is broken, with the liberation of CO₂.
Mobility: **Hexazinone** is very poorly adsorbed to soil particles, very soluble in water, and slowly degraded, so it is likely to be mobile in most soils and has the potential to contaminate groundwater.
ECOTOXICOLOGY: (for active ingredient)
Birds: Non-toxic.
 LD₅₀: Bobwhite quail: 2258 mg/kg
Fish: Slightly toxic.
 LC₅₀ (96 hr): Rainbow Trout: >320 mg/l
 Bluegill sunfish: >370 mg/l
Bees: Not toxic.
 LC₅₀: > 60 mg/bee

14. TRANSPORT INFORMATION

UN NUMBER: 3077
ADR/RD:
 Class: 9
 Packaging group: III
 Shipping name: Environmentally Hazardous Substance, Solid, N.O.S (Hexazinone 75 %)

IMDG/IMO:
 Class: 9
 Packaging group: III
 Shipping name: Environmentally Hazardous Substance, Solid, N.O.S (Hexazinone 75 %)

MARINE POLLUTANT

ICAO/IATA:
 Class: 9
 Packaging group: III
 Shipping name: Environmentally Hazardous Substance, Solid, N.O.S (Hexazinone 75 %)

13. DISPOSAL CONSIDERATION

Pesticide disposal: Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product that cannot be reused or reprocessed. Waste

15. REGULATORY INFORMATION

Symbol: Xi, Xn, N
Risk-phrase(s): R 22, R 36; R 41, R 51/R 53
Indication of danger: Irritant, Harmful, Dangerous for the environment.

Risk phrases:
 R 22 Harmful if swallowed.
 R 36 Irritating to eyes
 R 41 Risk of serious damage to eyes.

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R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases:

- S 1/2** Keep locked up and out of reach of children.
S 13 Keep away from food, drink and animal feeding stuffs.
S 20/21 When using do not eat, drink or smoke.
S 24/25 Avoid contact with skin and eyes.
S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

16. OTHER INFORMATION:

Packing and Labelling: Packed in 1, 2, 5, 10, 20 & 25 kg plastic containers or bags. Labelled according to South African regulations and guidelines.

Declaration: All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and is presented in good faith believed to be correct. This information applies to the product as such. In case of formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces formulation(s) containing this product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.

END OF DOCUMENT

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For detailed information on revisions, contact the Registration holder.