

VILLA HEXSAN 240 SL

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF PRODUCT AND COMPANY

Product Name: **HEXSAN 240 SL**
Herbicide

UN No. 2997

Supplier: **Villa Crop Protection (Pty) Ltd**
PO Box 10413
Aston Manor, 1630, South Africa

Telephone: (011) 3962233

Fax: (011) 3964666

Website: www.villacrop.co.za

Emergency telephone: +27 11 396 2233
(08:00 – 16:30)

24 Hr Emergency Numbers:

Bateleur: +27 83 1233 911 or
(Client: Villa Crop Protection) +27 860 333 911

In case of Poisoning:

Western Cape Poisons Tel. Service +27 861 555 777
 Griffon Poison Information Centre +27 82 446 8946
 Tygerberg Hospital +27 21 931 6129

2. COMPOSITION / INFORMATION ON INGREDIENTS

Common name: **Hexazinone**

Chemical Name: 3-cyclohexyl-6-dimethylamino-1-methyl-1,3,5-triazine-2,4-(1*H*,3*H*)-dione (**IUPAC**)

CAS No.: [51235-04-2]

Chemical Family: 1,2,4-triazinone

Chemical Formula: C₁₂H₂₀N₄O₂

Molecular weight: 252.3

Use: A herbicide for control of grasses and broadleaf weeds in ratoon sugarcane and in sugarcane verges and breaks.

Formulation: Water soluble liquid

Hazardous ingredients of toxicological concern:

Inert: concern:

Hexazinone severe eye irritant

Ethanol eye, skin irritant

Symbols: F, Xn, N

Risk-phrase(s): R 22, R 36; R 50/53

3. HAZARD IDENTIFICATION

Toxicity class: WHO III (a.i), EPA II.

Main hazard: Flammable

Likely routes of exposure: Skin and eye contact, ingestion and inhalation.

Eye contact:

Mild irritant. Direct contact with the product may cause irreversible eye damage.

Skin contact:

Significant skin permeation and systemic toxicity after contact appears unlikely. May cause mild 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

The acute toxicity to technical triazinones for humans is thought to be low, and no adverse health effects from exposure to these herbicides have been reported. In view of the toxicity induced in experimental animals the product may cause skin irritation, or rash, damage to the eyes, and effects on the liver (if large amounts are ingested).

Inhalation:

If vapours or mists have been inhaled, and irritation has developed, remove the source of contamination or move victim to fresh air. The patient should be kept under observation and obtain medical attention if irritation persists.

Skin contact:

Remove contaminated clothing, shoes and leather goods immediately. Gently wipe off excess chemical. Wash skin gently and thoroughly with non-abrasive soap and large amounts of water until no evidence of chemical remains (approximately 15 to 20 minutes). If irritation persists, seek medical advice immediately. Persons who become sensitized may require specialized medical management with anti-inflammatory agents.

Eye contact:

Immediately flush the contaminated eyes with gently flowing lukewarm water for 20 minutes, occasionally lifting upper and lower lids, until no evidence of chemical remains (approximately 15 to 20 minutes). Obtain medical attention if irritation persists.

Ingestion:

Do not induce vomiting. Do not give anything by mouth. Obtain medical attention immediately. If the person is alert, rinse mouth thoroughly with water.

Advice on treatment:

No specific antidote is available. Treat symptomatically and supportively when required. If large amounts have

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been ingested, perform gastric lavage and administer activated charcoal.

5. FIRE FIGHTING MEASURES

Hazardous products of combustion:

Fire may produce irritating and/or toxic vapours, mists or other products of combustion.

Extinguishing agents:

Extinguish fires with carbon dioxide, dry powder/dry chemical extinguisher, or alcohol-resistant foam. Water spray can be used, but not direct jet of water. Avoid the accumulation of polluted run-off from the site.

Fire fighting:

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.

Do not use high volume water jet, due to contamination risk. Contain water used for fire fighting for later disposal. Avoid the accumulation of polluted run-off from the site.

Special hazards:

The substance decomposes on heating producing toxic fumes including hydrogen chloride and nitrogen oxides.

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:

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

Environmental precautions:

Do not allow entering 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. Considered a Marine Pollutant.

Occupational spill:

Do not touch-spilled material; stop leak if you can do it without risk. Keep out unprotected persons and animals.

For spills: Soak up with absorptive material such as damp earth or sand or other suitable non-combustible

absorbent material. 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. Prevent material from spreading by damming in with absorptive material. Do not flush spilled material into drains. Keep spectators away and upwind.

To decontaminate spill area, tools and equipment, wash with a suitable solution (i.e. organic solvent, detergent bleach or caustic). Add the solution to the drums already collected. Label drums with its content and dispose it in accordance with local regulations.

Open burning or dumping of this material is prohibited.

Do not get water inside containers.

7. HANDLING AND STORAGE REQUIREMENTS

Handling:

Avoid contact with eyes, skin and clothing. Avoid inhalation of spray and vapour. Use with adequate ventilation. Do not eat, drink or smoke while working. 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. 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.

Storage:

Keep under lock and key and out of reach of unauthorised persons, children and animals. Store in its original labelled container in isolated, dry, cool and well-ventilated area. Not to be stored next to feeds 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.

Clothing: Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with this substance.

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Gloves: Employee must wear appropriate chemical-resistant gloves to prevent contact with this substance.

Eye protection: The use of safety goggles 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:

A clear liquid

Odour:

Strong solvent (ethanol) odour

Explosive properties:

High explosion risk

Oxidizing properties:

Not oxidizing

Corrosiveness:

Not corrosive

Density:

0.960 g/cm³ (20°C)

pH:

Not available

Storage stability:

Stable during storage for 14 days in 54°C (accelerated storage test)

Flash point:

25.1 °C (Flammable)

10. STABILITY AND REACTIVITY

Stability:

Stable under standard and normal storage conditions. Product is stable with a shelf life of 2 years, provided it is stored in its unopened, undamaged original containers in well-ventilated and dry conditions, away from sources of heat and spark generating equipment. The product is stable in neutral, weakly acidic and alkaline solutions but is rapidly hydrolysed by strong acids and alkalis. The product is stable to light.

Incompatibility:

Product is compatible with most other pesticides when used at normal rates. However, a compatibility test is required before using with other products. Do not physically mix concentrate directly with other herbicides or pesticide concentrates; always dilute first. Hydrolysed by strong acids and bases. May corrode plastic, steel and black iron.

Thermal decomposition:

Thermal decomposition products may include toxic oxides of nitrogen and carbon and toxic corrosive fumes of chlorides.

11. TOXICOLOGICAL INFORMATION

Acute oral LD₅₀, male rats: 2314 mg/kg

Acute dermal LD₅₀, rabbits: > 5278 mg/kg

Inhalation LC₅₀, 4hours, rats: > 7.48 mg/ℓ/h air

Acute skin irritation:

Non-irritating to skin.

Acute eye irritation:

Non-irritating to eyes.

Dermal sensitisation:

The product may provoke dermal sensitization.

Carcinogenicity:

No carcinogenic effects were observed in CrI-CD rats (36/sex/dose) given **Hexazinone** (94 to 96% pure) in the diet at 0, 200, 1000 or 2500 ppm (0, 10, 50 or 125 mg/kg/day) for 2 years.

Teratogenicity:

Not teratogenic.

Mutagenicity:

The compound was found not to be mutagenic with or without S-9 activation.

12. ECOLOGICAL INFORMATION

Degradability:

Microbial degradation of **Hexazinone** occurs in soil and natural waters. The triazinone ring is broken, with the liberation of CO₂. If released to the soil, **Hexazinone** will dissipate with a half-life of 1 to 12 months depending on soil and weather conditions.

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:

Birds: Minimally toxic.

LD₅₀: Bobwhite quail: > 2258 mg/kg

Fish: Slightly toxic.

LC₅₀ (96 hr): Rainbow Trout: < 44.98 mg/ℓ

Daphnia: Slightly toxic.

EC₅₀: *Daphnia magna* 27.14 mg/ℓ

Bees: Not toxic.

LC₅₀: > 60 mg/bee

Earthworms: Not toxic

LC₅₀ (14 days) > 2388.89 mg/kg silicon

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13. DISPOSAL CONSIDERATION

Pesticide disposal:

Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be reused 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.

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 that 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 dump site. Prevent contamination of food, feedstuffs, drinking water and eating utensils.

Comply with local legislation applying to waste disposal.

14. TRANSPORT INFORMATION

UN NUMBER: 2997

Road Transport ADR/RID:

Class: 9
 Packaging group: III
 Shipping name: Triazine pesticide, liquid, toxic

Flammable
 (Hexazinone 240 g/l)

Sea (IMDG-Code):

Class: 9
 Packaging group: III
 Shipping name: Triazine pesticide, liquid, toxic

Flammable
 (Hexazinone 240 g/l)

Considered a marine pollutant.

15. REGULATORY INFORMATION

Symbol: F, Xn, N
Indication of danger: Flammable, Harmful, Environmentally hazardous substance.

Risk phrases:
R10 Flammable

R 22 Harmful if swallowed.
R 36 Irritating to eyes
R 50/53 Very 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 the reach of children.
S 36/39 Wear suitable protective clothing and eye/face protection.
S 60 This material and its container must be disposed of as hazardous waste.
S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

16. OTHER INFORMATION

Packaging:

Packed in 1, 5, 10, 20 and 25 litres polyethylene plastic containers 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 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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