

VILLA AMETRYN 500 SC

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF PRODUCT AND COMPANY

Product Name: AMETRYN 500 SC
Herbicide
UN No. 3082
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 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: AMETRYN
Chemical Name: N^ε-ethyl-N^ε-isopropyl-6-methylthio-1,3,5-triazine-2,4-diamine (IUPAC)
CAS No.: [834-12-8]
Chemical Family: triazine
Chemical Formula: C₉H₁₇N₅S (Mol. wt.: 227.3)
Formulation: AMETRYN: 500 g/l
Suspension Concentrate

Use / Mode of Action:
Selective systemic herbicide for pre- and post-emergence control of most annual grasses and broad-leaved weeds. Absorbed by the leaves and roots, with translocation acropetally in the xylem and accumulation in the apical meristems. Photosynthetic electron transport inhibitor at the photosystem II receptor site.

Hazardous ingredients of toxicological concern:

| Inert: | concern: | % present: |
|--|----------------------|------------|
| AMETRYN | Harmful if swallowed | 50 % |
| formaldehyde | Irritant, corrosive | ± 0,3 % |
| water | non-hazardous | ± 48 % |
| Other non-hazardous inerts, not of concern | | ± 1.7 % |

Symbol: Xn
Indication of danger: Harmful
Risk-Phrases: R22, R36/38, R50

3. HAZARD IDENTIFICATION

Toxicity class: Active ingredient: WHO III.
Likely routes of exposure: Ingestion, skin and eye contact.
Eye contact: Not harmful. Mild irritant to the eyes and may be corrosive, due to inert. The product may be mildly irritating, but is unlikely to cause more than mild discomfort, which should disappear once contact ceases.
Skin contact: Not harmful. Contact with the skin, may result in a mild irritation, due to inert. The product may be mildly irritating, but is unlikely to cause more than mild discomfort, which should disappear once contact ceases.
Ingestion: Harmful if swallowed. The acute toxicity to technical triazines for man is thought to be low, and no adverse health effects from exposure to this herbicides has been reported. Symptoms of acute exposure to high doses include nausea, vomiting, diarrhoea, muscle weakness and salivation.
Inhalation: Data available indicates that the product is not harmful. No hazards in normal use, is expected. The product is unlikely to cause any discomfort or irritation.

4. FIRST AID MEASURES AND PRECAUTIONS

Inhalation: Immediately remove source of contamination or move victim to fresh air. Avoid mouth to mouth resuscitation. Keep person warm and at rest. Treat symptomatically and supportively as and when required. Seek medical advice immediately.
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.
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). Severe contamination may require medical attention.
Ingestion: Have victim rinse mouth thoroughly with water. Do not induce vomiting. In serious cases, seek medical advice immediately. Treat respiratory difficulty with artificial respiration and oxygen.
Advice to physician: No signs and symptoms of triazine poisoning are known or expected in humans. An antidote is neither known nor needed. Treat symptomatically when required. When large amounts have been ingested, gastric lavage or the administration of activated charcoal with water may be indicated.

VILLA AMETRYN 500 SC

MATERIAL SAFETY DATA SHEET

5. FIRE FIGHTING MEASURES

Fire/Explosion hazard: Not flammable. Not combustible. Will not burn until water component is driven off.

Extinguishing agents: Extinguish fires with carbon dioxide, dry powder, or alcohol-resistant foam. Water spray can be used for cooling of unaffected stock, but avoid water coming in contact with the product. Use as little water as possible. Use spray or fog. Solid stream may cause spreading. Contain water used for fire fighting for later disposal. 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.

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.

Personal protective equipment: Fire may produce irritating or poisonous vapours or gases (carbon dioxide, carbon monoxide and under some circumstances, oxides of nitrogen) 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 fumes. For personal protection see Section 8.

Environmental precautions: AMETRYN is moderately toxic to fish and very toxic to crustaceans. This product is an environmentally hazardous substance, and considered a marine pollutant.

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.

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: Harmful if swallowed. Avoid inhalation and contact with eyes and skin. Use with adequate ventilation. Do not handle broken packages without protective equipment. 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. Seek medical advice.

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.

Worker should shower at the end of each work day. Launder all clothing before it is re-used again.

Storage: Store in its original container in dry, cool, well-ventilated area. Avoid excess heat. Not to be stored next to foodstuffs and water supplies.

Keep out of reach of children, uninformed persons and animals. Do not contaminate other pesticides and fertilizers.

Storage stability: Stable for a period of 2 years under normal warehouse conditions.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

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. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

PERSONAL PROTECTIVE EQUIPMENT:

Respirator: An approved full-face respirator suitable for protection from spray or mists of pesticides is required. Limitations of respirator use specified by the approved agency and the manufacturer must be observed.

Clothing: Employee must wear appropriate protective (impervious) clothing, boots, hat and equipment to prevent repeated or prolonged skin contact with this substance. Do not wear leather clothing.

VILLA AMETRYN 500 SC

MATERIAL SAFETY DATA SHEET

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

Eye protection: The use of chemical resistant goggles or face shield.

Emergency eye wash: 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: Homogeneous white suspendible liquid without coagulation. A chemical odour.

Relative density: 1.084 ± 0.05 g/cm³.

Solubility in water: Suspendible with water.

Flash point: Not available. Water based, not flammable.

Flammability: Not flammable.

pH: 7.7.

10. STABILITY AND REACTIVITY

Stability: Considered stable for a period of 2 years under normal and recommended warehouse and light conditions. **AMETRYN 500 SC** is unlikely to react or decompose under the recommended conditions. The product is unlikely to undergo polymerization processes.

Hazardous decomposition: When exposed to fire, carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke may be produced. Nitrogen and its compounds, under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas.

11. TOXICOLOGICAL INFORMATION

Acute oral LD₅₀:

Formulation (calculated): > 1160 mg/kg in rats.

Acute dermal LD₅₀:

Formulation (calculated): > 3100 mg/kg in rats.

Acute inhalation LC₅₀:

Technical: > 5170 mg/ℓ/4 hours.

Acute skin irritation: Not harmful. Contact with the skin, may result in a mild irritation, due to inert.

Acute eye irritation: Not harmful. Mild irritant to the eyes and may be corrosive, due to inert.

Sensitization: May cause mild skin sensitization.

Teratogenicity/Development: No information available.

Mutagenicity: Studies have shown no mutagenicity.

Carcinogenicity: There is not adequate data to determine if **AMETRYN** can increase the risk of cancer in humans.

Organ Toxicity: Animal studies indicate that consuming large amounts of **AMETRYN** over a long period of time, results in liver damage.

ADI: 0.051 mg/kg b.w.

12. ECOLOGICAL INFORMATION

Degradation: Excretion of **AMETRYN** is rapid. In rats, 93 to 98% is eliminated in the urine and faeces within 72 hours. Irrespective of the dose or dosing regime, most is excreted within 3 to 4 days. Conjugation with glutathione and dealkylation are the main metabolic pathways.

AMETRYN is metabolized by tolerant plants and, to a lesser extend, by sensitive plants, to non-toxic substances by replacement of the methylthio group by a hydroxyl group, and by dealkylation of the amino groups.

When **AMETRYN** is released into soil, it will absorb moderately to soil; the average Koc being 388.4. It will slowly leach into the soil. Neither **AMETRYN** nor their hydroxyl metabolites leach past 6 inch depth with normal rainfall. However, both compounds are persistent and may leach under exaggerated rainfall, flood or irrigation. In the field, **AMETRYN** degraded with a half-life of 125 to 250 days. Degradation generally appears to be microbial and is more rapid in acidic soils than in neutral soils.

The long soil persistence of these compounds does create problems of soil carry over, which can damage succeeding cash crops.

If **AMETRYN** is released into water, it would absorb moderately to sediment and particulate matter. **AMETRYN** undergoes photolysis and photodegradation increases with decreasing pH. Half-life is 10.2 hours at pH 6.8.

AMETRYN may biodegrade in natural water.

ECOTOXICOLOGY:

Birds: Slightly toxic to birds.

LC₅₀ 8-day diet: Mallard ducks: 23 000 mg/kg

Bobwhite quail: 30 000 mg/kg

LC₅₀ 5-day diet: Mallard ducks: > 5620 mg/kg

Bobwhite quail: > 5620 mg/kg

Fish: Moderately toxic to fish.

LC₅₀ (96 hours): Bluegill sunfish: 19 mg/ℓ

Rainbow trout: 5 mg/ℓ

Daphnia: Very toxic to Daphnia.

Daphnia magna: 96-hour LC₅₀: 28 mg/ℓ

Bees: Slightly toxic to bees.

LD₅₀ (oral): > 100 µg/bee

Earthworms:

LC₅₀ (14 days): 166 mg/kg soil

Other organisms: **AMETRYN** is highly toxic to crustaceans, and moderately toxic to highly toxic to molluscs.

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

VILLA AMETRYN 500 SC

MATERIAL SAFETY DATA SHEET

water sources with the product or used containers. This product is considered a marine pollutant.

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 to drain 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 one 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 No.: 3082

Road Transport ADR/IRD:

Class: 9
 Packing group: III
 Shipping name: Environmentally hazardous substance, Liquid, N.O.S. (AMETRYN 500 g/l)

Maritime Transport IMDG/IMO:

Class: 9
 Packing group: III
 Shipping name: Environmentally hazardous substance, Liquid, N.O.S. (AMETRYN 500 g/l)

Considered a MARINE POLLUTANT.

15. REGULATORY INFORMATION

Symbol: Xn, N
Indication of danger: Harmful, Environmentally Hazardous Substance

Risk phrases:

R 22 Harmful if swallowed.
R 36/38 Irritation to eyes and skin.
R 50 Very toxic to aquatic organisms.

Safety phrases:

S 1/2 Keep locked up and out of the reach of children.
S 24/25 Avoid contact with skin and eyes.
S 36/37/39 Wear suitable protective clothing, gloves 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

Packing and Labelling: Packed in 1, 5, 10, 20, and 25 litres plastic containers and labelled according to the 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.

END OF DOCUMENT

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For detailed information on revisions, contact the Registration holder.