

VAPAM

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: VAPAM
Other identifier: Metam-Sodium
Recommended use: Herbicide, Fumigant, Insecticide, Nematicide, Fungicide
Restrictions on use: Soil sterilant controlling fungi, nematodes, weed seeds and insects.

Supplier: Universal Crop Protection (Pty) Ltd.
Co. Reg. No.: 1983/008184/07
PO Box 801,
Kempston 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 Tox. 5	H303
Dermal	Acute Tox. 5	H313
	Skin Corr. 1B	H314
	Skin Sens. 1	H317
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:

Causes severe skin burns and eye damage (Skin Corr. 1B).

May cause an allergic skin reaction (Skin Sens. 1).

Label elements:



Signal word: Danger

Hazard statements:

H303: May be harmful if swallowed.

H313: May be harmful in contact with skin.

H314: Causes severe skin burns and eye damage.

H317: May cause an allergic skin reaction.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects

Precautionary statements:

P260: Do not breathe dusts or mists.

P261: Avoid breathing dust, fumes, mists, gas, vapours, or spray. (respiratory sensitization).

P264: Wash hands and face thoroughly after handling.

P272: Contaminated work clothing should not be allowed out of the workplace.

P273: Avoid release into the environment.

P280: Wear impervious rubber gloves and boots, protective clothing, and chemical safety goggles.

P301+P317: IF SWALLOWED: Get medical help.

P301+P330+P331: IF SWALLOWED: Rinse mouth.

Do NOT induce vomiting.

P302+P317: IF ON SKIN: Get medical help.

P302+P352: IF ON SKIN: Wash with plenty of water and non-abrasive soap.

P302+P361+P354: IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.

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.

P316: Get emergency medical help immediately.

P333+P317: If skin irritation or rash occurs: Get medical help.

P363: Wash contaminated clothing before use.

P391: Collect spillage.

P405: Store locked up.

P501: Dispose of contents/container in accordance with local regulations.

Other hazards:

None known.

Toxicity:

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Classification according to GHS: Category 5.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Mixture:

Mixture

Chemical name	CAS	Conc. (w/v%)	Classification EC 1272/2008
Metam-Sodium	137-42-8	42 %	Acute Tox. 4 (H302) Skin corrosion 1B (H314) Skin sensitisation 1 (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)

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.

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. **VAPAM causes severe skin burns and an allergic skin reaction.**

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. VAPAM causes severe eye damage.**

Ingestion: Seek medical attention or call a poison control centre for treatment advice. Do not induce vomiting unless instructed to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person. If the person is alert, rinse mouth thoroughly with water.

Anticipated acute effects: None known.

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: None

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/ fumes or vapours. 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 very toxic / toxic to aquatic organisms and may cause 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 spilt product by diking area with sand or earth.

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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 spilt material back in original container. Do not re-use spilt material. Collect washings and add to the drums already collected. Do not flush spilt 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 inhale spray mist or vapours. 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. 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 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: For most well-ventilated conditions, no respiratory protection should be needed. 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: 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. Do not wear leather clothing.

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: Orange to light yellow-green liquid, soluble concentrate.

Odour: Essentially odourless to fairly strong odour of amine or sulphur.

Odour threshold: Not available.

pH (1% aqueous dilution): 9.5 – 11.0.

Melting point: Not available.

Freezing Point: Not available.

Boiling Point: 112°C.

Flash Point: > 93.3°C.

Flammability: Not flammable.

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Upper / lower explosion limits: Not available.
Vapour Pressure (mm Hg): 24 mmHg @ 25°C.
Relative Vapour Density: Not available.
Density / Relative density: Not available.
Solubility: Not available.
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: Extreme heat or exposure to flames.

Incompatible materials: This product is incompatible with additional water and strong aqueous acids. In addition, it is corrosive to copper, brass and zinc and may soften and/or discolour iron.

Hazardous decomposition products: When treated with water or heated to decomposition, this product will give off toxic fumes of methyl isothiocyanate (MITC), hydrogen sulphide and nitrogen oxides. If treated with strong acids, fumes or carbon disulfide and monomethylamine will be given off.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Oral LD₅₀ (24h) >2100 mg/kg (rats).

Dermal LD₅₀ >3000 mg/kg (rabbits).

Inhalation LC₅₀ (4h) >5.9 mg/l (4h) (rats).

Skin Irritation / Corrosion Causes severe skin burns.

Eye Damage / Irritation: Cause severe eye damage.

Skin Sensitization: May cause an allergic skin reaction.

Respiratory Sensitization: Not available.

Reproductive cell mutagenicity: Not available.

Carcinogenicity: Not available.

Reproductive toxicity: Not available.

Specific target organ toxicity – single exposure: Not available.

Specific target organ toxicity – repeated exposure: Not available.

Aspiration hazard: Not available.

Chronic Effects: Not available.

POTENTIAL ADVERSE EFFECTS:

None known.

Other information: Not available.

12. ECOLOGICAL INFORMATION

This product is very toxic to aquatic life with long lasting effects.

ECOTOXICITY DATA:

Active ingredient / inert name

Fish:

LC ₅₀ (96 h)	Guppies	4.2 mg/l
	Rainbow trout	35.2 mg/l
	Bluegill sunfish	0.39 mg/l

Daphnia:

EC ₅₀ (48 h)		2.3 mg/l
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Algae:

ErC ₅₀ (72 h)	<i>Pseudokirchneriella subcapitata</i>	1.08 mg/l
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Birds:

Acute oral LD ₅₀	Bobwhite quail	211 mg/kg
Dietary LC ₅₀ (5d)	Mallard ducks	>5000 mg/kg diet
	Bobwhite quail	>5000 mg/kg diet

ENVIRONMENTAL EFFECTS

Based on information for the active ingredient

Plants: Not determined.

Persistence and degradability: Not determined.

Bio-accumulative potential: Not determined.

Mobility in soil: In soil, rapidly decomposes to methyl isothiocyanate (q.v.), DT₅₀ 23 min to 4 d.

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.

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Container: 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.

14. TRANSPORT INFORMATION

UN Number: 3267

Road Transport ADR / ORD:

Class: 8
Packaging group: III
UN Proper Shipping Name: Corrosive liquid, Basic, Organic, N.O.S. (**Metam-sodium** 510 g/l)

Maritime Transport IMDG / IMO:

Class: 8
Packaging group: III
UN Proper Shipping Name: Corrosive liquid, Basic, Organic, N.O.S. (**Metam-sodium** 510 g/l)

Marine pollutant (Y/N): Y

Air Transport IATA / ICAO:

Class: 8
Packaging group: III
UN Proper Shipping Name: Corrosive liquid, Basic, Organic, N.O.S. (**Metam-sodium** 510 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 1, 5, 10, 20, 25, 200 litres fluorinated plastic containers labelled according to South African regulations and guidelines.

Other hazard statements, abbreviations, and explanations:

H302: Harmful if swallowed.

IATA: International Air Transport Association.

IBC: International Bulk Chemical.

ICAO: International Civil Aviation Organization.

IMDG: International Maritime Dangerous Goods

IMO: International Maritime Organization.

LD₅₀ 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.

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

Compiled: November 2021

Reviewed: May 2022

Revision no.: (2)

Next revision: May 2027

For detailed information on revisions, contact the Registration holder.