

VILLA PENDIMETHALIN 500 EC

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF PRODUCT AND COMPANY

Product Name: **PENDIMETHALIN 500 EC**
 Herbicide

UN No. 1993

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

Chemical family: Dinitroaniline Herbicide

Chemical formula: C₁₃H₁₉N₃O₄

Molecular weight: 281.3

Name	CAS#	g/l
Pendimethalin	40487-42-1	500 Min.
Emulsifier	N/A	100
Solvents	N/A	Add to 1L

3. HAZARD IDENTIFICATION

Toxicity class:
 WHO (ai III; EPA (Formulation) II)

NOEL:
 100 mg/kg - 2 year feeding trials.

Main hazard:
 Pendimethalin is highly toxic to aquatic organisms.
 Flammable.

Biological hazards:

Skin: Moderate irritant.

Eye: Moderate irritant.

Inhalation: May cause irritation.

Ingestion: May cause nausea, vomiting, and diarrhoea.

4. FIRST AID MEASURES AND PRECAUTIONS

Main symptoms of acute intoxication are:
 Nausea, vomiting, diarrhoea and gastro-intestinal tract irritation.

Inhalation:

Remove victim to fresh air immediately. Treat respiratory difficulty with artificial respiration preferably mouth to mouth. Get medical attention immediately.

Skin contact:

Remove contaminated clothing. Wash affected area immediately with soap & large amount water. If irritation develops consult a physician.

Eye contact:

Wash immediately with large amounts of water. If irritation develops consult a physician.

Ingestion:

Treat symptomatically and supportively. If vomiting occurs keep head lower than hips to prevent aspiration. Get medical attention immediately. Never give fluids or induce vomiting if patient is unconscious or having convulsions.

Advice to the physician:

There is no specific antidote.
 Treat symptomatically and supportively in response to reactions from patient.

5. FIRE FIGHTING MEASURES

Extinguishing media:

Foam, carbon dioxide, dry chemical, and water spray.

Fires:

Use as little water as possible. Dike area of fire to prevent pesticide run-off. Do not contaminate personnel or equipment, or handle broken packages or container without protective equipment. Avoid breathing vapours or fumes from burning materials, control run-off water. If water enters drainage system advise authorities downstream.

Hazardous decomposition products:

Combustion may produce carbon and nitrogen oxides.

6. ACCIDENTAL RELEASE MEASURES (SPILLAGE)

Personal precautions: Wear suitable protective clothing.

Environmental precautions:

Contain run-off to prevent entry into water or drainage systems. Advise water authority if spillage has entered watercourses or drainage systems.

Large spills: Barricade area and consult manufacturer.

Small spills: Clean up with sand, clay, sawdust or other absorbent material and place in suitable fibreboard containers for later disposal. Rinse spill area and tools with soapy water.

Spill/Leak Procedures: For large spills, barricade area and consult manufacturer.

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7. HANDLING AND STORAGE REQUIREMENTS

Handling: Do not consume food in the work area. Wash hands and exposed skin with soap and water before eating, drinking or smoking after work.

Storage: Product should be stored in compliance with local regulations. Store in a cool, dry, well-ventilated separate area in original container. Keep away from sources of ignition and protect from exposure to fire and heat. Do not store below 4 °C. Segregate from oxidizers.

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.

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: Yellow to dark brown liquid.

Odour: Mild aromatic hydrocarbon odour.

Flammability: Flammable.

Explosive properties: Non explosive.

Flash point: 61°C

Corrosive properties: Non corrosive.

pH: 5.0 to 8.0.

Relative density: 1.02 g/ml

Stability: Stable.

10. STABILITY AND REACTIVITY DATA

Storage stability: Stable under normal storage conditions. Avoid excessive heat and direct sunlight. Active before start of test: 512 g/l;

Active after 14 days at 54 °C +/- 1 °C – 504 g/l.

% Active determined after completion of the storage stability test at lowest recommended dilution after standing for 30 minutes: Distilled water – 96 %; Standard hard water – 95 %

Incompatibility: Incompatible with alkaline material, acid or oxidizing materials

Hazardous decomposition products: None under normal storage conditions. Combustion may produce oxides of carbon, nitrogen and hydrochloric acid.

11. TOXICOLOGICAL INFORMATION

Acute oral LD₅₀: 1100 mg/kg

Acute dermal LD₅₀: > 2000 mg/kg

Acute inhalation LC₅₀: > 320 mg/l

Acute skin irritation: Moderate skin irritation.

Acute eye irritation: Moderate eye irritation.

Dermal sensitisation: Not a skin sensitizer.

Carcinogenicity: None

Teratogenicity: None

Mutagenicity: None

12. ECOLOGICAL INFORMATION

Birds:

Pendimethalin is slightly toxic to birds, with an acute oral LD₅₀ of 1421 mg/kg in mallard duck and 8-day dietary LC₅₀ values of greater than 3149 mg/kg in bobwhite quail, and greater than 10,900 mg/kg in mallard duck.

Fish:

Pendimethalin is toxic to fish.

LC ₅₀ :	Rainbow trout:	0.14 mg/l
	Blue gill sunfish:	0.2 mg/l

Daphnia pulex:

Toxic to Daphnia.

Bees:

LD₅₀: > 50 µg/bee (Topical)

Earthworm: No data available.

FATE AND BEHAVIOUR IN SOIL:

Rate of degradation:

The product is not subject to microbial degradation. When using according to label instructions, no carry over to subsequent crops is expected. Half-life in soil and water is dependent on soil conditions and is approximately 3 to 4 months.

Adsorption/desorption:

The product adsorbs strongly to soil organic matter and clay and does not leach the soil to contaminate ground water.

Mobility in soil:

It is practically insoluble in water, and thus will not leach appreciably in most soils, and should present a minimal risk of groundwater contamination.

FATE AND BEHAVIOUR IN WATER:

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Rate and route of degradation:

Pendimethalin is stable to hydrolysis but it is degraded by light in aquatic systems. The product may be removed from water by its strong tendency to bind to sediment and organic matter. It is rapidly degraded in sediment.

FATE AND BEHAVIOUR IN AIR:

Rate and route of degradation:

Slight losses of **Pendimethalin** can result from photodecomposition and volatilization.

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: 1993

Road Transport ADR/RID:

Class: 3

Packaging group: III

Shipping name: Flammable liquid, n.o.s.
(**Pendimethalin 50 %**)

IMDG/IMO:

Label of class: 3 **Marine pollutant.**

Packing group: III

Shipping name: Flammable liquid, n.o.s.
(**Pendimethalin 50 %**)

AIR/IATA:

Class: 3

Packing group: III
 Shipping name: Flammable liquid, n.o.s.
(**Pendimethalin 50 %**)

FLAMMABLE LIQUID.

15. REGULATORY INFORMATION

Symbol: F, Xn, Xi, N
Indication of danger: Harmful

Risk phrase(s):

- R 10** 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 16** Keep away from sources of ignition – No smoking.
- S 24** Avoid contact with skin.
- S 36/39** Wear suitable protective clothing and eye/face protection.
- S 29** Do not empty into drains.
- 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 containers - bottles, drums, cans 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.

END OF DOCUMENT

Compiled: February 2011

Reviewed: May 2017