

# NEMACUR® 100 GR

## SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** NEMACUR® 100 GR  
**Other identifier:** Fenamiphos 100 GR  
**Recommended use:** Nematicide, Insecticide  
**Restrictions on use:** Agriculture

**Supplier:** Villa Crop Protection (Pty) Ltd  
**Co. Reg. No.:** 1992/002474/07  
PO Box 10413,  
Aston Manor, 1630, South Africa  
**Telephone:** (011) 396 2233  
**Fax:** (011) 396 4666  
**Website:** [www.villacrop.co.za](http://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 |
| <b>Health</b>                                                     |                   |              |
| Oral                                                              | Acute Toxicity 3  | H301         |
| Dermal                                                            | Acute Toxicity 3  | H311         |
| Eye                                                               | Eye Irritation 2  | H319         |
| Inhalation                                                        | Acute Toxicity 3  | H331         |
| Carcinogenicity                                                   | Carcinogenicity 2 | H351         |
| <b>Environment</b>                                                |                   |              |
| Aquatic Acute                                                     | Aquatic Acute 1   | H400         |
| Aquatic Chronic                                                   | Aquatic Chronic 1 | H410         |

#### The most important adverse effects:

#### Physiochemical effects:

None known.

#### Human health effects:

Toxic if swallowed.  
Toxic in contact with skin.  
Toxic if inhaled.  
Causes serious eye irritation.  
Suspected of causing cancer.

#### Label elements:



**Signal word:** Danger.

#### Hazard statements:

H301: Toxic if swallowed.  
H311: Toxic in contact with skin.  
H319: Causes serious eye irritation.  
H331: Toxic if inhaled.  
H351: Suspected of causing cancer.  
H400: Very toxic to aquatic life.  
H410: Very toxic to aquatic life with long lasting effects.

#### Precautionary statements:

P203: Obtain, read and follow all safety instructions before use.  
P261: Avoid breathing dust or spray mist.  
P264+P265: Wash hands thoroughly after handling. Do not touch eyes.  
P270: Do not eat, drink or smoke when using this product.  
P271: Use only outdoors or in a well-ventilated area.  
P273: Avoid release into the environment.  
P280: Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.  
P301+P310+P316: IF SWALLOWED: Immediately call a POISON CENTER and get emergency medical help.  
P302+P352+P316: IF ON SKIN: Wash with plenty of water and non-abrasive soap. Get emergency medical help immediately.  
P304+P340+P316: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get emergency medical help immediately.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P318: IF exposed or concerned, get medical advice.  
P330: Rinse mouth.  
P337+P317: If eye irritation persists: Get medical help.  
P361+P364: Take off immediately all contaminated clothing and wash before reuse.  
P391: Collect spillage.  
P403+P233: Store in a well-ventilated place. Keep container tightly closed.  
P405: Store locked up.  
P501: Dispose of content/container to suitable landfill in accordance with local regulations.

#### Special labelling of certain mixtures:

None known.

#### Other hazards:

None known.

#### Toxicity:

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Classification according to GHS: Category 3

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

**Substance/Mixture:** Mixture.

**Composition:**

| Chemical Name  | CAS        | Conc. (m/m %) | Classification EC 1272/2008                                                                                                                                    |
|----------------|------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fenamiphos     | 22224-92-6 | 10 %          | Acute Toxicity 2 (H300)<br>Acute Toxicity 2 (H310)<br>Eye irritation 2 (H319)<br>Acute Toxicity 2 (H330)<br>Aquatic Acute 1 (H400)<br>Aquatic Chronic 1 (H410) |
| Attapulgate GR | 12174-11-7 | <90%          | Carcinogenicity 2 (H351)                                                                                                                                       |

## 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 and consult a doctor.

**Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. **Call a physician or poison control centre immediately.**

**Skin:** **Call a physician or poison control centre immediately.** Wash with plenty of water and non-abrasive soap. Remove and isolate contaminated clothing and shoes. Wash contaminated clothing before reuse.

**Eyes:** Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. **Get medical attention if irritation develops and persists.**

**Ingestion:** **Call a physician or poison control centre immediately.** Rinse mouth. Do not induce vomiting without advice from poison control centre. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Never give anything by mouth to a victim who is unconscious or is having convulsions.

**Anticipated delayed effects:** None known.

**Most important symptoms/effects:** This is a cholinesterase inhibiting organophosphorous pesticide. May cause weakness, headache, tightness in chest, blurred vision, non-reactive pinpoint pupils, salivation, sweating, nausea, vomiting, diarrhea and abdominal cramps.

## Advice to physician:

In the case of cholinergic symptomatology, the specific antagonist is atropine sulfate. If a large amount of product has been ingested, and if there was no vomiting, gastric emptying can be done within 2 hours after ingestion. Precautions should be taken to prevent pulmonary aspiration. Activated carbon can be used. Administer atropine sulfate at a dose of 1 to 2 mg every 15 or 20 minutes until the reversal of the cholinergic symptoms, at which time the maintenance dose should be adapted to maintain a condition free of symptoms of intoxication and with no atropine signals. Atropine should not be administered in the absence of cholinergic symptoms, neither should it be administered by a lay person. Measures such as the correction of electrolyte disorders and of the acid-base balance should be adopted. Maintain the patient under cardiac monitoring and with respiratory support if necessary.

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media:** Foam, dry chemical powder and carbon dioxide (CO<sub>2</sub>).

**Unsuitable Extinguishing Media:** Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards:** During fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

**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 bunker gear.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Toxic if swallowed. Avoid contact with skin and eyes. Do not breathe in spray mist or dust. 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

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product is classified as very 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 spilled product by diking area with sand or earth.

**Methods and Materials for Clean-up:** Contain spilled product by picking up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal. Do not create a powder cloud by using a brush or compressed air. Label containers with the contents and dispose of according to local regulations. Do not place spilled material back in original container. Do not re-use spilled material. To decontaminate the spill area, tools and equipment, wash with water and suitable detergent. Collect washings and add to the drums already collected. Do not flush spilled material or washings into drains or waterways. See section 13 for disposal considerations.

### 7. HANDLING AND STORAGE

#### Handling:

**Precautions for safe handling:** Toxic if swallowed and inhaled. Avoid contact with skin and eyes. Ensure adequate ventilation during handling and use. 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. Avoid excess heat. 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:** HDPE packaging in carton box or HDPE packaging in aluminium foil + Kraft bags.

### 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Permissible concentration:** No occupational exposure limits has 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 OSHA PELs 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:** The employee must wear a NIOSH approved air-purifying respirator with cartridges approved for organic vapours.

**Hand Protection:** The employee must wear appropriate chemically resistant gloves e.g., nitrile rubber gloves to prevent contact with this substance.

**Eye Protection:** Avoid contact with eyes. The employee must wear a face shield or chemical safety goggles when handling the concentrate and when applying the product 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.

**Emergency eyewash:** Where there is any possibility that an employee's eyes may be exposed to this substance; the employer should provide an eyewash fountain or appropriate alternative within the immediate work area for emergency use.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Beige granules.

**Odour:** Weak characteristic odour.

**pH (1% aqueous dilution):** Not available.

**Melting point:** Not available.

**Freezing Point:** Not available.

**Boiling Point:** Not available.

**Flash Point:** Not available

**Flammability:** Not available

**Upper/lower explosion limits:** Not available.

**Vapour Pressure (mm Hg):** Not available.

**Relative Vapour Density:** Heavier than air.

**Density/Relative density:** Not available.

**Solubility:** Practically insoluble in water.

**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

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temperatures and conditions. Store below 50°C, preferably below 30°C, and not for prolonged periods in direct sunlight.

**Reactivity:** This product is non-reactive under normal conditions of use, storage and transport.

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur.

**Conditions to Avoid:** Extreme heat or exposure to flames.

**Incompatible Materials:** Alkaline compounds. Strong oxidizing agents.

**Hazardous Decomposition Products:** Emits hazardous fumes and smoke of sulfur oxides, oxides of phosphorus and other unknown composition when heated to decomposition or burned.

### 11. TOXICOLOGICAL INFORMATION

#### ACUTE TOXICITY:

Calculated according to GHS

Oral LD<sub>50</sub> > 50 mg/kg (rat)

Dermal LD<sub>50</sub> > 600 mg/kg (rat)

Inhalation LC<sub>50</sub> (4h) > 0.5 mg/l (rat)

Skin Irritation/Corrosion: Not classified.

Eye Damage/Irritation: Causes serious eye irritation.

Skin Sensitization: Not classified.

Respiratory Sensitization: Not classified.

Reproductive cell mutagenicity: Not classified.

Carcinogenicity: Suspected of causing cancer.

Reproductive toxicity: Not classified.

**Specific target organ toxicity – single exposure:** Not classified.

**Specific target organ toxicity – repeated exposure:** Not classified.

Aspiration hazard: Not classified.

Chronic Effects: Not available.

#### POTENTIAL ADVERSE EFFECTS:

Inhalation: Toxic if inhaled.

Skin contact: Toxic in contact with skin.

Ingestion: Toxic if swallowed.

**Other information: Symptoms related to the physical, chemical and toxicological characteristics:**

Acute cholinesterase depression may be evidenced by headache, nausea, vomiting, diarrhoea, abdominal cramps, excessive sweating, salivation and tearing, constricted pupils, blurred vision, tightness in chest, weakness, muscle twitching and confusion; in extreme cases, unconsciousness, convulsions, severe respiratory depression and death may occur.

### 12. ECOLOGICAL INFORMATION

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

#### ECOTOXICITY DATA:

Active ingredient

#### Fish:

|                         |                    |             |
|-------------------------|--------------------|-------------|
| LC <sub>50</sub> (96 h) | Rainbow trout      | 0.0721 mg/l |
|                         | Bluegill sunfish   | 0.0093 mg/l |
|                         | Sheepshead minnows | 0.017 mg/l  |

#### Daphnia:

|                         |  |              |
|-------------------------|--|--------------|
| LC <sub>50</sub> (48 h) |  | 0.00106 mg/l |
|-------------------------|--|--------------|

#### Algae:

|                          |                                |         |
|--------------------------|--------------------------------|---------|
| ErC <sub>50</sub> (96 h) | <i>Scenedesmus subspicatus</i> | 11 mg/l |
|--------------------------|--------------------------------|---------|

#### Birds:

|                               |                |                |
|-------------------------------|----------------|----------------|
| Acute oral LD <sub>50</sub>   | Bobwhite quail | 0.7-1.6 mg/kg  |
|                               | Mallard ducks  | 0.9-1.2 mg/kg  |
| Dietary LC <sub>50</sub> (5d) | Mallard ducks  | 316 mg/kg diet |
|                               | Bobwhite quail | 38 mg/kg diet  |

#### Bees:

|                          |  |             |
|--------------------------|--|-------------|
| LD <sub>50</sub> contact |  | 0.28 µg/bee |
| LD <sub>50</sub> oral    |  | 0.45 µg/bee |

#### Worms:

|                  |                       |           |
|------------------|-----------------------|-----------|
| LC <sub>50</sub> | <i>Eisenia fetida</i> | 888 mg/kg |
|------------------|-----------------------|-----------|

### ENVIRONMENTAL EFFECTS:

**Plants:** Fenamiphos is only found directly after application. A short period after treatment, fenamiphos-sulfoxide is the dominant metabolite.

**Persistence and degradability:** Readily degradable in water and degradable on soil surfaces. Duration of activity in soil is 4 months. Soil DT<sub>50</sub> is several weeks. The major degradation products are fenamiphos-sulfoxide and fenamiphos sulfone and their phenols.

**Bio-accumulative Potential:** Partition coefficient n-octanol / water (log Kow) Fenamiphos 4.01. Absorption and excretion very rapid. Within 4 h of treatment 40-80% has been excreted. After 48 h, >96% had been excreted.

**Mobility in soil:** Low mobility.

**Other adverse effects:** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### 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.

**Container:** Emptied containers retain product residues. Do not re-use the empty container for any other purpose. Empty containers by inverting the empty container over the spray or mixing tank. Thereafter, rinse the container three times with a volume of water equal to a quarter of

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that of the container. Puncture the triple rinsed container and dispose of via an approved collector or recycler ([www.croplife.co.za](http://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. Observe all labelled safeguards until container is destroyed.

### 14. TRANSPORT INFORMATION

**UN NUMBER:** 2783  
**Road Transport ADR/RID:**  
 Class: 6.1  
 Packaging group: II  
 UN proper Shipping name: ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC (Fenamiphos 100 g/kg)

**Maritime Transport IMDG/IMO:**  
 Class: 6.1  
 Packing group: II  
 UN proper Shipping name: ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC (Fenamiphos 100 g/kg)

**Marine Pollutant (Y/N):** Yes.

**Air Transport IATA/ICAO:**  
 Class: 6.1  
 Packing group: II  
 UN proper Shipping name: ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC (Fenamiphos 100 g/kg)

**Special/Environmental Precautions:** Read safety instructions, SDS and emergency procedures before handling.

**Transport in bulk** (according to MARPOL 73/78, Annex II and the IBC code): Not applicable.

### 15. REGULATORY INFORMATION

**Safety, health and environmental regulations/legislation for the mixture:**

OHS 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:** 1, 5, 10, 20 & 25kg HDPE packaging in carton box or HDPE packaging in aluminium foil + Kraft bags and labelled according to South African regulations and guidelines.

**Other hazard statements, abbreviations and explanations:**

**H300:** Fatal if swallowed.

**H310:** Fatal in contact with skin.

**H330:** Fatal if inhaled.

**IATA:** International Air Transport Association.

**IBC:** International Bulk Chemical.

**ICAO:** International Civil Aviation Organization.

**IMDG:** International Maritime Dangerous Goods

**IMO:** International Maritime Organization.

**LD<sub>50</sub> 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.

**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

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For detailed information on revisions, contact the Registration holder.