



SAFETY DATA SHEET

PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: HARVEST FENAMIPHOS 400 EC
 ACTIVE: **FENAMIPHOS 400G/L EC**
 REGISTRATION HOLDER: HARVEST CROP SOLUTIONS (PTY) LTD.
 DISTRIBUTOR: HARVEST CHEMICALS (PTY) LTD.
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1. CHEMICAL PRODUCT

Common Name: Fenamiphos

Chemical Name: Ethyl 3-methyl-4-(methylthio)phenyl(1-methylethyl)phosphoramidate

CAS No.: 22224-92-6

2. COMPOSITION/INFORMATION ON INGREDIENTS

Composition	CAS No.	Content w/v
Fenamiphos	22224-92-6	400g/ℓ min
Other ingredients	-----	Up to 1ℓ

3. HAZARDS IDENTIFICATION

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

4. FIRST AID MEASURES

Ingestion: If ingestion is suspected, call a doctor immediately. Drink one or two glasses of water and induce vomiting by touching the back of the throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

Skin contact: Remove contaminated clothing. Wash affected area with soap and water. Seek medical advice if irritation develops.

Eye contact: immediately flush with water for at least 15 minutes, holding eyelids open. Seek medical attention if irritation persists.

Inhalation: Unlikely under normal circumstances.

NOTE TO PHYSICIAN:

This product contains an organophosphorus insecticide. If symptoms of organophosphate poisoning are present, the administration of atropine sulphate is indicated. Administer atropine sulphate in large therapeutic doses. In mild cases, start treatment by giving 1-2mg of atropine intravenously every 15 minutes until signs of atropinisation appear (dry mouth, flushing, and dilated pupils if pupils were originally pinpoint). In severe cases, start treatment by giving 2-4mg intravenously every 5-10 minutes until fully atropinized. Dosages for children should be appropriately reduced. 2-PAM is also an antidote and may be administered in conjunction with atropine. Do not give morphine. Watch for pulmonary oedema which may develop in serious cases of poisoning even after 24 hours. At first sign of pulmonary oedema, place patient in oxygen tent and treat symptomatically.

5. FIRE FIGHTING MEASURES

Flash Point: 24 °C

Remove or prevent any source of ignition.

Extinguishing agent: Water, Carbon Dioxide, Dry Chemical.

Special fire fighting procedures: Keep out of smoke. Cool exposed containers with water spray. Fight fire from upwind position.

Wear full protective equipment (overall, boots, gloves, eye protection and self-contained breathing equipment).

Contain runoff to prevent entry into sewers or waterways.

6. ACCIDENTAL RELEASE MEASURES

Containment: Isolate the contaminated area and remove unauthorised and unprotected personnel.

Contain spillage with sufficient absorbent material to absorb all liquid. Sweep into suitable container and store in a safe place until disposal. Clean contaminated area with detergent and rinse with water.

Protective equipment: Wear overalls, impervious gloves, rubber boots, face shield or goggles.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin and eyes. When using, do not eat, drink or smoke. Wash thoroughly after using this product.

Storage: Store in the original container in a cool, dry, well-ventilated place away from food, drink and animal feeding stuffs. Keep container tightly closed, away from children, uninformed persons and animals.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Precautions:

Acute effects of exposure: Inhalation, dermal absorption or ingestion of this material may result in systemic intoxication due to inhibition of the enzyme cholinesterase. The sequence of development of systemic effects varies with the route of entry, and the onset of symptoms may be delayed up to 12 hours. Complete symptomatic recovery from sub-lethal poisoning usually occurs within one week once the source of exposure is completely removed.

Chronic effects of exposure: Cholinesterase inhibition sometimes persists for 2-6 weeks, thus repeated exposure to small amounts of this material may result in an unexpected cholinesterase depression causing symptoms such as malaise, weakness, and anorexia that resemble other illnesses such as influenza. Exposure to a concentration that would not have produced symptoms of cholinesterase inhibition in a previously exposed person.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear light brown liquid

Colour: amber

pH: 8.62

Melting/Freezing point: 0°C

Solubility in water: 560ppm

Specific gravity: 1.022 at 20°C

Bulk density: Not established

Vapour pressure: 0.12 mPa at 20°C

10. STABILITY AND REACTIVITY

Stability: stable under normal conditions.

Conditions to avoid: Extreme temperatures.

Materials to avoid: strong alkaline and oxidant materials.

Hazardous decomposition products: Toxic fumes may be evolved if involved in a fire.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50: rat 20-30mg/kg; male cavy: 200mg/kg; dogs: 20mg/kg.

Dermal LD50: male rat: 600mg/kg; female rabbit: 71.5mg/kg

Eye effects: Rabbit, severe, irreversible irritation to the cornea and/or conjunctiva was observed. This product is highly toxic and can be readily absorbed through the mucous membranes of the eye.

Skin effects: Rabbit: Slight dermal irritant.

Sensitization: Guinea pig: Not a dermal sensitizer.

Carcinogenicity: Not a carcinogen.

Fenamiphos was investigated for carcinogenicity in chronic feeding studies using mice and rats. There was no evidence of a carcinogenic potential observed in either species at dose levels up to and including 50 ppm, the highest dose tested.

Mutagenicity:

When tested in cytogenetic under in vivo conditions, fenamiphos gave no indication of genotoxic potential.

Neurotoxicity:

In a neurotoxicity study, antidote-protected hens were administered 2 oral doses of fenamiphos at 25mg/kg. Following each dose, hens were observed for a 3-week period. There was no clinical histopathological evidence of delayed neurotoxicity.

12. ECOLOGICAL AND ECOTOXICOLOGICAL INFORMATION

Technical grade:

Quail acute oral LD50: 0.7-1.6 mg/kg

Mallard acute oral LD50: 0.9-1.2 mg/kg

Rainbow trout: LC50: 0.072 mg/ℓ (96h)

Bluegill LC50: 0.0096 mg/ℓ (96h)

Bee LD50 (oral): 0.45 µg/bee

Mobility: Completely miscible with water.

Persistence and degradability: Readily degradable in water; DT50 in soil ±50 days.

Ecotoxicity: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS

Rinse the empty container three times with a volume of water equal to at least 10% of that of the container and add the rinsing's to the contents of the spray tank before disposing of the container in the prescribed manner.

Destroy empty container by perforation and flattening and never use for any other purpose.

Disposals should be carried out in accordance with local, state and national legislation.

14. TRANSPORT INFORMATION

UN No. 3017

Air, Land and Sea Transport

UN Shipping Name: Organophosphorus pesticide, liquid, toxic, flammable (Fenamiphos 400g/ℓ)

Packaging Group: 1

Class: 6.1 + 3.3

15. REGULATORY INFORMATION

Registration No. L XXXX, Act No. 36 of 1947; Republic of South Africa.

16. OTHER INFORMATION

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to endure the transfer of all relevant information from this MSDS to their on MSDS.

