FARM AG INTERNATIONAL (Pty) Ltd

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SECTION 1 - PRODUCT & COMPANY IDENTIFICATION

Substance: fenamiphos
Product Name: **FARMAG FENAMIPHOS 400 EC**
Product Use: Nematicide and Insecticide
Creation Date: June 2017
Revision Date: March 2021

24 Hr Emergency Number: 082 903 5685
In case of Poisoning:
Poison Information Centre 082 446 8946
Tygerberg Hospital: (021) 931 6129
Poison Emergency Enquiries (021) 689 5227
In case of Spillage:
HAZMAT: 0800 147 112

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

Active ingredient: Fenamiphos 400g/l EC
Chemical family: Organophosphorus insecticide
Chemical name: Ethyl 3-methyl-4-(methylthio)phenyl(1-methylethyl)phosphoramidate
Formula: $C_{13}H_{22}NO_3PS$
Cas no: 2222-4-92-6
Hazchem class:

SECTION 3 - HAZARD IDENTIFICATION

Hazardous components: Fenamiphos
Symbols: Not applicable
Risk-phrase(s): WHO-Ia

SECTION 4 - FIRST AID MEASURES AND PRECAUTIONS

First aid for eyes: Hold eyelids open and flush with copious amounts of water for 15 minutes. Seek medical attention immediately.
First aid for skin: In case of contact, remove contaminated clothing and wash affected areas with plenty of soap and water. Wash clothing before reuse. Call a physician if irritation develops or persists. If signs of intoxication (poisoning) occur, get medical attention immediately.
First aid for inhalation: If a person is overcome by excessive exposure to aerosols or vapours of this material, remove to fresh air or uncontaminated area. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention as soon as possible.
First aid for ingestion: If ingestion is suspected, call a physician or poison control centre. Drink one or two glasses of water and induce vomiting by touching back of throat with finger, or, if available, administer syrup of ipecac. If syrup of ipecac is available, administer 1 tablespoonful (15 mL) of syrup of ipecac followed by 1 to 2 glasses of water. If vomiting does not occur within 20 minutes, repeat the dose once. Do not induce vomiting or give anything by mouth to an unconscious person.
Note to physician: This product contains the organophosphorus insecticide. If symptoms of organophosphate poisoning are present, the administration of atropine sulfate is indicated. Administer atropine sulfate in large therapeutic doses. In mild cases, start treatment by giving 1-2 mg of atropine intravenously every 15 minutes until signs of atropinization appear (dry mouth, flushing, and dilated pupils if pupils were originally pinpoint). In severe cases, start treatment by giving 2-4 mg intravenously every 5-10 minutes until fully atropinized. Dosages for children should be appropriately reduced. 2-PAM is also antidotal and may be administered in conjunction with atropine. Do not give morphine. Watch for pulmonary edema which may develop in serious cases of poisoning even after 24 hours. At first sign of pulmonary edema, place patient in oxygen tent and treat symptomatically.

SECTION 5 - FIRE-FIGHTING MEASURES

Flammable limits:

Upper explosive limit (uel) (%): Not established.

Lower explosive limit (lel) (%): Not established.

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. Use self-contained breathing equipment. Contain runoff to prevent entry into sewers or waterways. Equipment or materials involved in pesticide fires may become contaminated.

SECTION 6 - ACCIDENTAL RELEASE MEASURES (SPILLAGE)

Spill or leak procedures: Isolate area and keep unauthorized people away. Do not walk through spilled material. Avoid breathing vapors and skin contact. Remove sources of ignition if combustible or flammable vapors may be present and ventilate area. Wear proper protective equipment. Dike contaminated area with absorbent granules, soil, sand, etc. If large spill - material should be recovered. Small spills can be absorbed with absorbent granules, spill control pads, or any absorbent materials. Carefully sweep up absorbed spilled material. Place in covered container for reuse or disposal. Scrub contaminated area with detergent and bleach solution and/or detergent and lye in water solution. Repeat. Rinse with water. Use dry absorbent material such as clay granules to absorb and collect wash solution for proper disposal. Contaminated soil may have to be disposed. Do not allow material to enter streams, sewers, or other waterways or contact vegetation.

Waste disposal method: Follow container label instructions for disposal of wastes generated in compliance with the FIFRA product label. In other situations dispose in an RCRA hazardous waste incinerator.

Empty container precautions: Do not reuse the container. Clean and empty containers should be disposed of in accordance with State and local laws.

SECTION 7 - HANDLING AND STORAGE REQUIREMENTS

Storage temperature (min/max): OF/30 day average not to exceed 100 F

Shelf life: Not noted

Special sensitivity: Heat, moisture

Handling/storage precautions: Store in a cool, dry area designated specifically for pesticides. Do not store near any material intended for use or consumption by humans or animals.

SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION

Route(s) of entry: Inhalation; Skin Contact; Skin Absorption; Eye Contact.

Human effects and symptoms of overexposure:

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 in a person who was not previously exposed may produce severe symptoms of cholinesterase inhibition in a previously exposed person. Repeated skin contact may result in defatting of the skin by the solvents in the product which can lead to redness and irritation of the skin. Chronic overexposure to these solvent components may cause mucous membrane irritation, nausea, and headache, loss of appetite, weakness, and alcohol intolerance.

Medical conditions aggravated by exposure: No specific medical conditions are known which may be aggravated by exposure to the active ingredient in this product; however, any disease, medication, or prior exposure which reduces normal cholinesterase activity may increase susceptibility to the toxic effects of the active ingredient. In addition, certain pre-existing skin disorders may be aggravated by exposure to this product due to the solvent components.

Eye protection requirements: Splash-proof goggles should be used to prevent liquid splashes from getting into the eyes.
Skin protection requirements: Avoid skin contact. Wear long sleeves and trousers. Use chemical-resistant gloves, boots or shoe covers, and apron to prevent dermal exposure.
Respirator requirements: Wear a NIOSH-approved pesticide respirator.
Ventilation requirements: Maintain exposure levels below the applicable exposure limits through the use of general and local exhaust ventilation.
Medical surveillance: Plasma and/or red blood cell cholinesterase activity can be used to detect excessive absorption of fenamiphos. It is preferable to establish a pre-exposure baseline value for best comparisons. Contact Bayer Corp., Agriculture Division, for additional information. If significant cholinesterase depression occurs, no further exposure should be allowed until cholinesterase values return to normal.
Additional protective measures: Clean water should be available for washing in case of eye or skin contamination. Educate and train employees in safe use of the product. Follow all label instructions. Launder clothing separately after use. Wash thoroughly after handling.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical form:	Liquid.
Appearance:	Clear light brown liguid.
Color:	Amber.
Alkalinity:	<= 0.05% (calculated as NaOH)
Flashing point:	30-35 D.C.
pH:	Not established.
Boiling point:	Not established.
Melting/freezing point:	0 °C
Solubility in water:	560 ppm
Specific gravity:	1.02 @ 20 °C
Bulk density:	Not established.
Vapor pressure:	4.7 X 10^A-5 mm Hg @ 20 °C
Vapor density:	Not established (Air = 1).
Stability:	It is stable under the neutral and slightly conditions.

SECTION 10 - STABILITY AND REACTIVITY

Stability:	This is a stable material.
Hazardous polymerization:	Will not occur.
Incompatibilities:	Alkaline materials, strong oxidants.
Instability conditions:	Temperatures above 50 C (120 F). Subject to hydrolysis. Unstable in alkaline media.
Decomposition products:	Proposed compounds due to fire or other extreme conditions: SO2, H3PO4, Amines

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute toxicity	
Oral	LD50: Rat: 20-30 mg/kg; male cavy: 200 mg/kg, dogs: 20 mg/kg
Dermal	LD50: Male rat: 600 mg/kg; Female rabbit: 71.5 mg/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:	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 studies 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 25 mg/kg. Following each dose, hens were observed for a 3-week period. There was no clinical or histopathological evidence of delayed neurotoxicity.

SECTION 12 - DISPOSAL CONSIDERATION

Waste disposal method: Follow container label instructions for disposal of wastes generated in compliance with the FIFRA product label. In other situations dispose in an RCRA hazardous waste incinerator.
Empty container precautions: Do not reuse the container. Clean and empty containers should be disposed of in accordance with State and local laws.

SECTION 13 - TRANSPORT INFORMATION

Technical shipping name: Fenamiphos 400g/l EC
Product label: Not noted.
Dot (domestic surface)
DOT product RQ lbs (kgs): None.
Hazard label(s): Poison
Hazard placard(s): Poison
ICAO/IATA (AIR)
SUBSIDIARY RISK: None.

SECTION 14 - REGULATORY INFORMATION

Proper shipping name: Organophosphorus Pesticides, Liquid, Toxic, N.O.S.*
Hazard class or division: 6.1
Un/na number: UN3018
Packing Group: I

NFPA 704M RATINGS:

Health:	3	0=Insignificant
Flammability:	2	1=Slight
Reactivity:	1	2=Moderate
Other:		3=High
		4=Extreme

OSHA status: This product is hazardous under the criteria of the Federal
SARA title: III
Section 311/312 hazard categories: Immediate Health Hazard; Delayed Health Hazard; Fire Hazard
RCRA status: If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

SECTION 15 - OTHER INFORMATION

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.