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MATERIAL SAFETY DATA SHEET

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Supersedes:

TRANSPORTATION EMERGENCY

CHEMTREC:(800)-424-9300

EMERGENCY AND PRODUCT INFORMATION

OHP, Inc.:(800)-356-4647

FENSTOP™

EPA Registration Number: 432-1389-59807

I. CHEMICAL PRODUCT INFORMATION

Product Name FENSTOP FUNGICIDE

Chemical Family Imidazole

Product Use A fungicide used for the prevention and control of certain diseases of commercially grown ornamentals in greenhouses. Not for residential use.

II. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component	CAS-No.	Average % by Weight
Name		
Fenamidone	161326-34-7	44.40
Trade Secret Ingredient(s)		

III. HAZARDS IDENTIFICATION

NOTE Please refer to Section XI for detailed toxicological information.

Emergency Overview Caution! Moderate eye irritation. Avoid contact with skin, eyes and clothing. Harmful if inhaled. Avoid breathing spray mist. Remove and wash contaminated clothing before re-use. Wash thoroughly with soap and water after handling.

Physical State liquid opaque

Appearance off-white

Routes of Exposure Eye contact, Skin contact, Inhalation

Immediate Effects

Eye Moderate eye irritation.
Avoid contact with eyes.

Skin May cause slight irritation.
Avoid contact with skin and clothing.

Inhalation Harmful if inhaled.
Avoid breathing spray mist.

IV. FIRST AID MEASURES

General When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Eye In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.

Skin Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Call a physician or poison control center immediately.

If symptoms persist, call a physician. Wash off immediately with soap and plenty of water. Take off contaminated clothing and shoes immediately.

Ingestion Rinse out mouth and give water in small sips to drink. If symptoms persist, call a physician. Do not induce vomiting.

Do not induce vomiting or give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Inhalation Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.

Notes to Physician

Signs and Symptoms Local:
Systemic:
irritation

Hazards May pose an aspiration pneumonia hazard.

Treatment There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

V. FIRE FIGHTING MEASURES

Flash Point > 100 °C / > 212 °F

Autoignition Temperature 510 °C / 950 °F

Explosiveness Not explosive

Fire and Explosion Hazards In the event of fire the following can be released: sulphur dioxide (SO₂)
nitrous gases (NO_x)
carbon monoxide (CO)
Heating or fire can release toxic gas.

Suitable Extinguishing Media foam, carbon dioxide (CO₂), dry powder, water spray, dry powder, carbon dioxide (CO₂), foam.

Fire Fighting Instructions Do not allow run-off from fire fighting to enter drains or water courses. The product in case of warehouse fires does not add to the spreading of it.

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Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. Equipment or materials involved in pesticide fires may become contaminated.

Wear self-contained breathing apparatus and protective suit.

VI. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protective equipment. Evacuate personnel to safe areas.

Methods for Cleaning Up: Take up with absorbent material (e.g. sand, diatomaceous earth or a proprietary absorbent material). For disposal, pack in tightly closed containers. Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces. Take all necessary action to prevent and to remedy the effects of the spill.

Additional Advice: Information regarding waste disposal, see section XIII. Information regarding personal protective equipment, see VIII. Information regarding safe handling, see section VII.

Recover the product by pumping, suction or absorption using a dry and inert absorbent clay. Dispose of as hazardous waste.

Scrub contaminated area with soap and water. 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 removed and disposed. Do not allow product to enter streams, sewers or other waterways. Do not allow product to contact vegetation.

VII. HANDLING AND STORAGE

Handling Procedures: Handle and open container in a manner as to prevent spillage.

Storing Procedures: Keep containers tightly closed in a dry, cool and well-ventilated place. Store in original container. Keep away from direct sunlight. Protect against frost.

Do not contaminate water, food, or feed by storage or disposal.

Work/Hygienic Procedures: Wash hands and face before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift.

VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection: Avoid contact with eyes. Avoid contact with skin.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use

detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

Train employees in safe use of the product. Follow all label instructions.

Engineering Controls: Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.

Eye/Face Protection: Safety glasses / face shield

Hand Protection: Chemical-resistant gloves made of waterproof material such as neoprene, butyl rubber, barrier laminate or nitrile rubber.

Body Protection: Wear long-sleeved shirt and long pants and shoes plus socks.

Respiratory Protection: Ensure adequate ventilation. If not adequate, use a chemical cartridge-type respirator approved by the National Institute of Occupational Health and Safety.

Exposure Limits: This product contains material which are Trade Secret and may have Occupational Exposure Limits. If more information is required, call the product information number listed in Section I

IX. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: off-white

Physical State: liquid opaque

Specific Gravity: 1.10 - 1.15

Density: 1.125 g/cm³ at 20 °C

Decomposition Temperature: 500 °C
DSC

X. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions.

Hazardous Decomposition

Products: Nitrogen oxides (NO_x)
Sulphur oxides
Carbon oxides

XI. TOXICOLOGICAL INFORMATION

Only acute toxicity studies have been performed on this product as formulated. The non-acute information pertains to the active ingredient, fenamidone technical.

Acute Oral Toxicity

male/female rat: LD50: > 5,000 mg/kg

Acute Dermal Toxicity

male/female rat: LD50: > 5,000 mg/kg

Acute Inhalation Toxicity

male/female rat: LC50: 0.9 mg/l

Exposure time: 4 h

(actual)

Maximum attainable concentration.

No deaths

Determined in the form of liquid aerosol.

male/female rat: LC50: > 3.6 mg/l

Exposure time: 1 h

(actual)

Determined in the form of liquid aerosol.

Extrapolated from the 4 hr LC50.

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Skin Irritation: rabbit: Slight irritation.
Eye Irritation: rabbit: Mild eye irritation.
Sensitization: guinea pig: Non-sensitizing.
Subchronic Toxicity: Fenamidone caused no systemic or local effects at the limit dose (1000 mg/kg/day) in a 28-day dermal toxicity study in rats.
Chronic Toxicity: The principal organs affected in rats and dogs from long-term exposure to fenamidone included the liver and/or thyroids.

Assessment Carcinogenicity

Fenamidone was not carcinogenic in oncogenicity studies in rats and mice.

ACGIH

None.

NTP

None.

IARC

None.

OSHA

None.

Reproductive &

Developmental Toxicity

REPRODUCTION: Fenamidone was not a reproductive toxicant in a two-generation study in rats.

DEVELOPMENTAL TOXICITY: Fenamidone was not a primary developmental toxicant in rats and rabbits. Developmental effects (e.g., delayed ossifications) were observed in rats but were considered secondary to maternal toxicity.

Neurotoxicity: Fenamidone was not a neurotoxicant in acute and subchronic neurotoxicity screening studies in rats.

Mutagenicity: The overall weight of evidence indicates fenamidone is not mutagenic or genotoxic based on a battery of in vitro and in vivo mutagenicity studies.

XII. ECOLOGICAL INFORMATION

Toxicity to Fish

Rainbow trout (*Oncorhynchus mykiss*)
LC50: 0.74 mg/l
Exposure time: 96 h

Bluegill sunfish LC50: 0.74 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient fenamidone.

Oncorhynchus mykiss (rainbow trout)
LC50: 0.74 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient fenamidone.

Cyprinodon variegatus (sheepshead minnow)
LC50: 2.5 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient fenamidone.

Toxicity to Aquatic Plants

Scenedesmus subspicatus
IC50: 3.4 mg/l
Exposure time: 72 h

Acute Toxicity to Aquatic Invertebrates

Water flea (*Daphnia magna*)
static test
EC50: 0.055 mg/l
Exposure time: 48 h

Daphnia
EC50: 0.19 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient fenamidone.

Mysidopsis bahia (mysid shrimp)
EC50: 0.069 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient fenamidone.

Eastern Oyster
EC50: 0.120 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient fenamidone.

Toxicity to other organisms

Acute Oral
Bobwhite quail
LD50: > 2,000 mg/kg
The value mentioned relates to the active ingredient fenamidone.

Short Term Dietary
Bobwhite quail
> 5,200 ppm
Exposure time: 5 d

Short Term Dietary
Mallard duck
LC50: > 5,000 ppm
Exposure time: 5 d

Environmental Precautions: Toxic to fish, shrimp and oysters. Toxic to aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to fish/aquatic organisms in adjacent sites. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product only as specified on the label.

Ecological Information: The ecological data given are those of the active ingredient.

XIII. DISPOSAL CONSIDERATIONS

General Disposal Guidance: Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of at an approved waste facility.

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Container Disposal: Triple rinse containers. Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or incineration, or if allowed by State and Local authorities, by burning. If burned, stay out of smoke.

XIV. TRANSPORT INFORMATION

DOT CLASSIFICATION:

Not Regulated for Domestic Surface Transportation

FREIGHT CLASSIFICATION:

Compounds, Tree or Weed Killing, N.O.I., other than poison; Having a density of greater than 20 LBS. per cubic foot

XV. REGULATORY INFORMATION

US Federal Regulations

TSCA List

None.

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

None.

SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

None.

US States Regulatory Reporting

CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients

None.

Canadian Regulations

Canadian Domestic Substance List

None.

Environmental

CERCLA

None.

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

XVI. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 2 Flammability - 0 Reactivity - 0 Others - none

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

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