

MATERIAL SAFETY DATA SHEET



For Chemical Emergency, Spill, Leak, Fire, Exposure, or
Accident, Call CHEMTREC Day or Night: 1-800-424-9300
For Medical Emergencies Only, Call: 1-877-325-1840

Voluntary Purchasing Groups, Inc.
230 FM 87
Bonham, Texas 75418

Ferti-lome® F-Stop

Effective Date: December 19, 2008

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT: Ferti-lome® F-Stop

EPA No.: 62719-461-7401

SIGNAL WORD: CAUTION

COMPANY IDENTIFICATION:

Voluntary Purchasing Groups, Inc.
230 FM 87
Bonham, TX. 75418

2. COMPOSITION / INFORMATION ON INGREDIENTS:

Myclobutanil: alpha-butyl Alpha- (4-chlorophenyl)-1H- 1,2,4-triazole-1-propanenitrile	CAS#088671-89-0	95. %
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Impurities Associates with the Active Ingredient	4.5%
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This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not 'Hazardous' per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

3. HAZARDOUS IDENTIFICATIONS:

EMERGENCY OVERVIEW

White to yellow crystalline solid with no odor. May cause eye irritation with corneal injury. LC₅₀ for skin absorption is >5000 mg/kg. Oral LD₅₀ is 1600-2710 mg/kg. Aerosol LC₅₀ is >5.12 mg/L for 4 hours. Toxic to aquatic organisms and birds.

EMERGENCY PHONE NUMBER: 800-424-9300

POTENTIAL HEALTH EFFECTS: This section includes possible adverse effects, which could occur if this material is not handled in the recommended manner.

EYE: May cause moderate eye irritation with corneal injury.

SKIN: Brief contact is essentially non-irritating to skin. Prolonged skin contact is unlikely to result in absorption of harmful amounts. The LD₅₀ for skin absorption in rabbits is >5000 mg/kg.

INGESTION: Low toxicity if swallowed. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. The oral LD₅₀ for rats is 1600-2620 mg/kg (males) and 1800-2710 mg/kg/ (females).

INHALATION: Excessive exposure may cause irritation to upper respiratory tract (nose and throat). The aerosol LC₅₀ for rats is >5.1 mg/L for hours.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: In animals, effects have been reported on the following organs: liver, testes, adrenal gland, kidney and thyroid.

CANCER INFORMATION: Myclobutanil did not cause cancer in laboratory animals

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TERATOLOGY (BIRTH DEFECTS): Myclobutanil did not cause birth defects in laboratory animals. Has been toxic to the fetus in laboratory animals at doses non-toxic to the mother.

REPRODUCTIVE EFFECTS: In laboratory animals, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

4. FIRST AID:

EYES: immediately flush eyes with water; remove contact lenses, if present after the first 5 minutes. then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferable from an ophthalmologist.

SKIN: Wash skin with plenty of water.

INGESTION: Call a poison control center or doctor immediately for treatment advise. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Never give anything by mouth to an unconscious person.

INHALATION: move person to fresh air; if effects occur, consult a physician.

NOTE TO PHYSICIAN: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE FIGHTING MEASURES:

FLASH POINT Not applicable

FLAMMABLE LIMITS

LFL: Not applicable

UFL: Not applicable

EXTINGUISHING MEDIA: Use the following extinguishing media when fighting fires involving this material: carbon dioxide, dry chemical and water spray.

UNUSUAL HAZARDS: Pesticide particulates can become airborne. Combustion generates toxic fumes of the following hydrogen chloride.

FIREFIGHTING EQUIPMENT: Wear self-contained breathing apparatus (pressure demand NIOSH approved or equivalent) and full protective gear.

SPECIAL PROCEDURES: Contain run-off. Remain upwind. Avoid breathing smoke. Use water spray to cool containers exposed to fire.

6. ACCIDENTAL RELEASE MEASURES:

ACTION TO TAKE FOR SPILLS/LEAKS: sweep up small spills and place in a suitable container or disposal. Report large spills to CHEMTREC 800-424-9300. Keep dust to a minimum. Keep out of sewers and open bodies of water.

Wear appropriate protective equipment when handling a spill of this material. If exposed to material during clean-up operations see Section 4 for actions to follow. Remove all contaminated clothing promptly. Wash all exposed skin areas with soap and water immediately after exposure. Thoroughly launder clothing before reuse. Do not take clothing home to be laundered.

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7. HANDLING AND STORAGE:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep out of reach of children. Avoid eye contact. Wash thoroughly with soap and water after handling. Do not swallow. Do not store this material near food, feed, or drinking water. Store in a well-ventilated area. Store in a dry area with the container tightly closed when not in use. Store out of direct sunlight in a cool place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

These precautions are suggested for conditions where the
Potential for exposure exists. Emergency conditions may require additional precautions.

EXPOSURE GUIDELINE(S):

Fertilome F-Stop is 1 mg/m³ TWA and 3 mg/M³ STEL.

ENGINEERING CONTROLS: Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

EYE/FACE PROTECTION: Use chemical goggles.

SKIN PROTECTION: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur.

RESPIRATORY PROTECTION: For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use a NIOSH approved air-purifying respirator.

APPLICATORS AND ALL OTHER HANDLERS: Refer to the product label for personal protective clothing and equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES:

COLOR: White to yellow

STATE: Crystalline solid

ODOR: None

PH: Not applicable

VISCOSITY: Not applicable

SPECIFIC GRAVITY (Water=1): 1.11

VAPOR DENSITY (air=1): Not applicable

VAPOR PRESSURE: 1 mm Hg@392°F (200°C)

MELTING POINT: 145-154°F (63-68°C)

BOILING POINT: 396-406°F (202-208°C) @ 1 mm Hg

SOLUBILITY IN WATER: 142 ppm @ 77°F (25°C)

PERCENT VOLATILITY: 0%

EVAPORATION RATE (Bac=1): Not applicable

10. STABILITY AND REACTIVITY:

STABILITY: This material is stable under normal storage conditions.

INCOMPATIBILITY: Avoid contact with strong oxidizing agents, particularly concentrated nitric acid.

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HARARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may yield the following: Hydrogen chloride.

HAZARDOUS POLYMERIZATION: Not known to occur.

11. TOXICOLOGICAL INFORMATION:

MUTAGENICITY: In-vitro and animal genetic toxicity studies were negative.

12. EGOLOGICAL INFORMATION:

ENVIRONMENTAL FATE:

ECOTOXICOLOGY:

Material is highly toxic to aquatic organisms on an acute basis (LC₅₀ or EC₅₀ is between 0.1 and 1 mg/L in the most sensitive species tested).

Acute LC₅₀ in bluegill (*Lepomis macrochirus*) is 2.4-4.1 mg/L.

Acute LC₅₀ in rainbow trout (*Oncorhynchus mykiss*) is 4.2 mg/L.

Acute LC₅₀ in water flea (*Daphnia magna*) is 11 mg/L.

Maximum acceptable toxicant concentration (MATC) in fish early life-stage study is between 0.98-2.2 mg/L.

Growth inhibition EC₅₀ in green alga (*Selenastrum capricornutum*) is 1.0 mg/L.

Growth inhibition EC₅₀ in alga (*Scenedesmus sp.*) is 2.655 mg/L.

Acute immobilization EC₅₀ in water flea (*Daphnia magna*) is 17 mg/L.

Acute LC₅₀ in sheepshead minnow (*Cyprinodon variegatus*) is 4.7 mg/L.

Acute LC₅₀ in saltwater mysid (*Mysidopsis bahia*) is 0.24 mg/L.

Acute EC₅₀ in shell deposition inhibition in Eastern oyster (*Crassostrea virginica*) is 0.72 mg/L.

Material is practically non-toxic to birds on a dietary basis (LC₅₀ is >5000 ppm).

Dietary LC₅₀ in bobwhite (*Colinus virginianus*) is >5000 ppm.

Dietary LC₅₀ in mallard (*Anas platyrhynchos*) is >5000 ppm.

Material is slightly toxic to birds on an acute basis (LD₅₀ is between 501 and 2000 mg/kg).

Acute oral LD₅₀ in bobwhite (*Colinus virginianus*) is 510 mg/kg.

Acute contact LD₅₀ in honeybee (*Apis mellifera*) is >100 ug/bee.

13. DISPOSAL CONSIDERATIONS:

DISPOSAL METHOD: Wastes resulting from the use of this product may be disposed of on site according to label directions or at an approved waste disposal facility. Follow all local, state and federal requirements for disposal.

14. TRANSPORT INFORMATION:

U. S. DEPARTMENT OF TRANSPORTATION (DOT) INFORMATION:

This material is not regulated for transportation.

15. REGULATORY INFORMATION:

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.

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U.S. REGULATIONS

SARA 313 INFORMATION: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER
CONCENTRATION	
MYCLOBUTANIL	088671-89-0 95.5%

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Section 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

An immediate health hazard

A Delayed health hazard

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986:

WARNING: This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.

The chemical is myclobutanil (CAS #008671-89-0)

TOXIC SUBSTANCES CONTROL ACT (TSCA): All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory

STATE RIGHT-TO-KNOW: The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

CHEMICAL NAME	CAS NUMBER	LIST
MYCLOBUTANIL	088671-89-0	NJ2

NJ2=New Jersey Environmental Hazardous Substance (present at greater than or equal to 1.0%)

OSHA HAZARD COMMUNICATION STANDARD: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS:

Health	3
Flammability	1
Reactivity	0

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND): To the best of our knowledge, this product contains no chemical subject to reporting under CERCLA.

The Information Herein Is Given In Good Faith, But No Warranty, Express or Implied, Is Made. Consult Voluntary Purchasing Groups for Further Information.