

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® Crabgrass Preventer Plus Lawn Food

Effective Date: December 19, 2008

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT: Ferti-lome® Crabgrass Preventer Plus Lawn Food
EPA No.: 62719-150-7401

COMPANY IDENTIFICATION:

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

2. COMPOSITION / INFORMATION ON INGREDIENTS:

Benefin: N-Butyl-N-ethyl- Alpha, alpha, alpha-trifluoro- 2,6-dinitro-p-toluidine	CAS# 001861-40-1	64.1%
Trifluralin: alpha,alpha,alpha Trifluoro-2,6-dinitro-N,N- Dipropyl-p-toluidine	CAS# 001582-09-8	32.0%
Inert ingredients		3.9%

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

Hazardous chemical. Yellow-orange solid. Aromatic odor. May cause eye irritation. Prolonged exposure may cause skin irritation and may cause allergic reaction. The dust may cause upper respiratory tract irritation. The LD₅₀ for skin absorption in rabbits is >5000 mg/kg; the oral LD₅₀ for rats is >2 mg/L for 4 hours. Heating product above 90°C can lead to violent reactions. Product is toxic to fish.

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 irritation with corneal injury.

SKIN: Prolonged exposure may cause skin irritation. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts. The LD₅₀ for skin absorption in rabbits is expected to be >5000 mg/kg. May cause allergic skin reaction in susceptible individuals.

INGESTION: Single dose oral toxicity is considered to be low. The oral LD₅₀ for rats is expected to be >2000 mg/kg. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury.

INHALATION: Vapors are unlikely due to physical properties. Dust may cause irritation to upper respiratory tract. Single exposure to dust is not likely to be hazardous. The LC₅₀ for rats is expected to be >2 mg/l for 4 hours.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: The major component(s) have been shown to cause blood, kidney, liver and skin effects.

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CANCER INFORMATION: Benefin has caused tumors in rats only at doses exceeding the maximum tolerated dose. No tumors were observed at lower dose levels. A low incidence of urinary tract tumors was seen in only one of five chronic studies in rats with trifluralin. Trifluralin is not anticipated to be a carcinogenic risk to man.

TERATOLOGY (BIRTH DEFECTS): Birth defects are unlikely. Exposure having no adverse effects on the mother should have no effect on the fetus. Trifluralin has been toxic to the fetus in laboratory animals at doses toxic to the mother.

REPRODUCTIVE EFFECTS: The major component(s) have been shown to interfere with reproduction in animal studies.

4. FIRST AID:

EYES: Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel.

SKIN: Wash off in flowing water or shower.

INGESTION: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

INHALATION: Remove to fresh air if effects occur. Consult a physician.

NOTE TO PHYSICIAN: No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

5. FIRE FIGHTING MEASURES:

FLASH POINT: Not applicable

METHOD USED: Not applicable

FLAMMABLE LIMITS

LFL: Not applicable

UFL: Not applicable

AUTO-IGNITION TEMPERATURE: Not applicable

EXTINGUISHING MEDIA: If product is involved in fire, use CO₂ or dry chemical.

FIRE AND EXPLOSION HAZARDS: Heating benefin to temperatures above 90°C (194°F) can lead to violet reaction with rapid pressure build-up. If product is involved in fire, noxious, toxic fumes may also be formed.

FIRE-FIGHTING EQUIPMENT: Wear full protective clothing and use positive-pressure, self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES:

ACTION TO TAKE FOR SPILLS: Contain and sweep up material of small spills and dispose as waste. Report large spills to CHEMTREC Day or Night 1-800-424-9300. Prevent runoff.

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7. HANDLING AND STORAGE:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

HANDLING: Keep out of reach of children. Harmful if swallowed, inhaled or absorbed through the skin. Causes eye irritation. May cause allergic reaction in susceptible individuals. Avoid breathing dust and contact with skin, eyes or clothing. Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

STORAGE: Store in original container. Avoid elevated temperatures. See product label for handling/storage precautions relative to the end use of this product.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

These precautions are suggested for conditions where a potential for exposure exists. Emergency conditions may require additional precautions.

EXPOSURE GUIDELINES: None established.

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:

RESPIRATORY PROTECTION: In dusty atmospheres, use a NIOSH approved dust respirator.

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

EYE PROTECTION: Use chemical goggles.

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

9. PHYSICAL AND CHEMICAL PROPERTIES:

BOILING POINT: Not applicable

VAPOR PRESSURE: Not applicable

VAPOR DENSITY: Not applicable

SOLUBILITY IN WATER: Not soluble in water

SPECIFIC GRAVITY: Not applicable

APPEARANCE: Yellow-orange solid

ODOR: Aromatic odor

PH: (AQUEOUS 50/50 7.5 TO 8.5)

10. STABILITY AND REACTIVITY:

STABILITY (CONDITIONS TO AVOID)(NOTE: The following information is based on data for benefin technical): Avoid elevated temperatures. Under normal handling and storage conditions, avoid heating above 90°C can lead to violet reaction with rapid pressure buildup.

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INCOMPATIBILITY; (specific materials to avoid) None known

HAZARDOUS DECOMPOSITION PRODUCTS;

Combustion may produce toxic fumes, such as oxides of nitrogen, carbon monoxide, and unidentified organic compounds.

HAZARDOUS POLYMERIZATION: Not known to occur.

11. TOXICOLOGICAL INFORMATION:

MUTAGENICITY (EFFECTS ON GENETIC MATERIAL):

For the active ingredients: in vitro and animal mutagenicity studies were negative.

12. ECOLOGICAL INFORMATION:

ENVIRONMENTAL FATE

MOVEMENT & PARTITIONING:

Based largely or completely on information for benefin. Bioconcentration potential is high (BCF >3000 or Log Pow between 5 and 7).

Expected to be relatively immobile in soil (Koc >5000).

Based largely or completely on information for trifluralin. Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Potential for mobility in soil is slight (Koc between 2000 and 5000).

DEGRADATION & PERSISTENCE:

Based largely or completely on information for benefin. Degradation is expected in the soil environment within days to weeks.

Based largely or completely on information for trifluralin.

Based on the stringent test guidelines, this material cannot be considered as readily biodegradable, however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

ECOTOXICOLOGY:

Based largely or completely on information for the active ingredient(s).

Material is very highly toxic to aquatic organisms on an acute basis (LC₅₀ / EC₅₀ is <0.1 mg/L in most sensitive species).

13. DISPOSAL CONSIDERATIONS:

DISPOSAL METHOD: Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

14. TRANSPORT INFORMATION:

For DOT regulatory information, if required, consult transportation regulations, product-shipping papers, or contact your Voluntary Purchasing Groups Inc representative.

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

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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.

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
Benfluralin	001861-40-1	64.1%

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 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

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
Benfluralin	001861-40-1	PA1

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:

Category	Rating
Health	2
Flammability	1
Reactivity	0

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, OR SUPERFUND): This product contains the following substance(s) listed as "Hazardous Substances" under CERCLA, which may require reporting of releases:

Chemical Name	CAS Number	RQ	% in Product
Trifluralin	001582-09-8	10	32%

THE INFORMATION HEREIN IS GIVEN IN GOOD FAITH, BUT NO WARRANTY, EXPRESS OR IMPLIED, IS MADE. CONSULT VPG, INC. FOR FURTHER INFORMATION.