

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

Effective Date: December 19, 2008

Hi-Yield® Turf & Ornamental Weed & Grass Stopper

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT: Hi-Yield® Turf & Ornamental Weed & Grass Stopper
EPA No.: 62719-483-7401

COMPANY IDENTIFICATION:

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

2. COMPOSITION / INFORMATION ON INGREDIENTS:

Dithiopyr: s,S'-dimethyl 2-(difluoromethyl-4-(2-methylpropyl)-6-(trifluoromethyl)-3,5-pyridinedicarbothioate	CAS#097886-45-8	91%
Impurities Associated with the Active Ingredient		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

Tan solid with a sulfur odor. May cause eye irritation. The LD₅₀ for absorption is >5000-5010 mg/kg. The oral LD₅₀ is >5010 mg/kg. The aerosol LC₅₀ is 5.98 mg/L for 4 hours. 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 slight temporary eye irritation. Corneal injury is unlikely.

SKIN: Brief contact is essentially non-irritating to skin. Did not cause allergic skin reactions when tested in guinea pigs. Prolonged skin contact is unlikely to result in absorption of harmful amounts. The LD₅₀ for skin absorption is >5000 mg/kg (rats) and >5010 mg/kg (rabbits).

INGESTION: Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. The oral LD₅₀ for rats is >5010 mg/kg.

INHALATION: At room temperature, exposure to vapor is minimal due to low volatility; single exposure is not likely to be hazardous. The aerosol LC₅₀ for rats is >5.98 mg/L for 4 hours.

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

CANCER INFORMATION: Did not cause cancer in laboratory animals.

TERATOLOGY (BIRTH DEFECTS): Did not cause birth defects or other effects in the fetus even at doses, which caused toxic effects in the mother.

REPRODUCTIVE EFFECTS: In animal studies, did not interfere with reproduction.

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4. FIRST AID:

EYE: Flush eyes thoroughly with water for several minutes. Remove contact lenses after initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferable an ophthalmologist.

SKIN: Wash skin with plenty of water.

INGESTION: No emergency medical treatment necessary.

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: 363°F (184°C)

FLAMMABLE LIMITS

LFL: Not determined

UFL: Not determined

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

UNUSUAL HAZARDS: Pesticide particulates can become airborne.

FIRE FIGHTING 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 for disposal. Report large spills to CHEMTREC 1-800-424-9300. 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.

7. HANDLING AND STORAGE:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep out of reach of children. Avoid skin and eye contact. Wash thoroughly with soap and water after handling. Do not swallow. Do not store this material near food, feed, or drinking water. The maximum recommended storage temperature for this material is 95°F (35°C).

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: Dithiopyr: Voluntary Purchasing Groups Industrial Hygiene Guide is 0.25 mg/m³ TWA and 0.75 mg/m³ STEL.

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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 safety glasses.

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

RESPIRATORY PROTECTION: No respiratory protection should be needed.

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

9. PHYSICAL AND CHEMICAL PROPERTIES:

COLOR: Tan

STATE: Solid

ODOR: Sulphur

PH: 4.2

VISCOSITY: Not applicable

SPECIFIC GRAVITY (Water=1): Not determined

DENSITY: 1.41 g/cm³

VAPOR PRESSURES: Negligible

MELTING POINT: 149°F (65°C)

BOILING POINT: Not applicable

SOLUBILITY IN WATER: 1.38 PPM @ 68°F (20°C)

PERCENT VOLATILITY: 0%

EVAPORATION RATE (Bac=1): Not applicable

10. STABILITY AND REACTIVITY:

STABILITY: This material is stable under normal storage conditions.

INCOMPATIBILITY: None known.

HAZARDOUS DECOMPOSITION PRODUCTS: None known.

HAZARDOUS POLYMERIZATION: Not known to occur.

11. TOXICOLOGICAL INFORMATION:

MUTAGENICITY: In-vitro genetic toxicity studies were negative.

12. ECOLOGICAL INFORMATION:

ENVIRONMENTAL FATE:

MOVEMENT & PARTITIONING:

No relevant information found.

DEGRADATION & PERSISTENCE:

No relevant information found.

ECOTOXICOLOGY:

Material is toxic to fish.

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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:

For non-bulk shipments by land:

Material is not regulated for transportation.

For bulk shipments by land or vessel:

ENVIRONMENTALLY HAZARDOUS SUBSTANCES.
SOLID, N.O.S. (DITHIOPYR)/9/UN3077/PGIII MARINE
POLLUTANT (DITHIOPYR)

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.

U.S. REGULATIONS

SARA 313 INFORMATION: To the best of our knowledge, this product contains no chemical subject to SARA Title III Section 313 supplier notification requirements.

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:

A delayed 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: This product is not known to contain any substances subject to the disclosure requirements of

New Jersey
Pennsylvania

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 ASSOCIATES (NFPA) RATINGS:

Health	0
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.

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