

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

Natural Guard® Grub Control

Effective Date: November 6, 2009

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT: Natural Guard® Grub Control
EPA No.: 62719-490-7401

COMPANY IDENTIFICATION:

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

2. COMPOSITION INFORMATION ON INGREDIENTS:

INGREDIENT:	CAS #	PERCENT
Halofenozide: 4-Chloro-2-Benzoyl-2-(1,1-Dimethyl-Ethyl)Hydrazide	112226-61-6	46%
Other Ingredients, Total, Including N-Methylpyrrolidinone	000872-50-4	54%

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 propriety ingredient shows, the identity may be made available as provided in this standard.

3. HAZARDOUS IDENTIFICATIONS:

EMERGENCY OVERVIEW

Hazardous Chemical. Yellow liquid, white crystals may be present, with a mild amino-like odor. May cause eye irritation with corneal injury. May cause skin irritation with local redness. For the active ingredient, the LD₅₀ for skin absorption is >2000 mg/kg, the oral LD₅₀ is 2850 mg/kg, and the inhalation LC₅₀ is >2.7 mg/kg. For the solvent, the oral LD₅₀ is between 4320-7000 mg/kg. Toxic to aquatic invertebrates.

EMERGENCY PHONE NUMBER: 800-992-5994

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 severe irritation with corneal injury.

SKIN: Brief contact may cause skin irritation with local redness. Prolonged or repeated exposure may cause severe irritation, even a burn. Prolonged skin contact is unlikely to result in absorption of harmful amounts. The dermal LD₅₀ has not been determined. The active ingredient has caused allergic skin reactions when tested in guinea pigs. The LD₅₀ for skin absorption in rabbits is >2000 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. Single dose oral LD₅₀ has not been determined. For the active ingredient, the oral LD₅₀ for rats is 2850 mg/kg. For the solvent, the oral LD₅₀ for rats is between 4320-7000 mg/kg.

INHALATION: At room temperature, exposure to vapor is minimal due to low volatility; vapor from heated material may cause adverse affects. Vapor from heated material may cause respiratory irritation. For the active ingredient, the LC₅₀ is >2.7 mg/L.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: For the solvent, in animals, effects have been reported on the following organs: liver and blood-forming organs (bone marrow & spleen). No relevant information found on the other components.

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CANCER INFORMATION: The solvent did not cause cancer in laboratory animals. No relevant information found on the other components.

TERATOLOGY (BIRTH DEFECTS): N-Methylpyrrolidinone has caused toxic effects to the fetus in laboratory animals at high dose levels with either mild or undetectable maternal toxicity. No relevant information found on the other components.

REPRODUCTIVE EFFECTS: For the solvent, in animal studies, did not interfere with reproduction. No relevant information found on the other components.

4. FIRST AID MEASURES:

EYE: 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, preferably from an ophthalmologist.

SKIN: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. Destroy items, which cannot be decontaminated, including leather articles such as shoes, belts, and watchbands.

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

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

NOTE TO PHYSICIAN: If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Repeated excessive exposure may aggravate pre-existing blood or spleen disease.

5. FIRE FIGHTING MEASURES:

FLASH POINT: 93°C (199°F) (Solvent)

FLAMMABLE LIMITS:

LFL: 1.3% (NMP)

UFL: 9.5% (NMP)

EXTINGUISHING MEDIA: Use water spray, alcohol resistant foam, dry chemical, or carbon dioxide to extinguish fires.

FIRE & EXPLOSION HAZARDS: Use water spray to cool containers exposed to fire. Dike and collect water used to fight fire. Remain upwind and avoid breathing smoke.

FIRE FIGHTING EQUIPMENT: Wear self-contained breathing apparatus (NIOSH approved or equivalent) and full protective equipment.

6. ACCIDENTAL RELEASE MEASURES:

ACTION TO TAKE FOR SPILLS/LEAKS: Absorb small spills with an inert absorbent such as granular clay or sawdust. Shovel or sweep the absorbed material into covered containers for proper disposal. For large spills, dike the area to prevent spill from spreading and report at 800-992-5994.

7. HANDLING AND STORAGE:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store in a cool, dry, well-ventilated area. Prevent cross contamination with other materials. Store in original container and out of the reach of children. Open dumping is prohibited. Avoid temperature extremes during storage; ambient temperature preferred for storage. Do not contaminate water, food, or livestock feed by storage or disposal. Keep container tightly closed when not in use.

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:

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N-MethylpyrrolidinoneL AIHA WEEL is 10 ppm, Skin. Interim Industrial Hygiene Guide is 500 ppm.

A "skin" notation following the exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by contact with vapors or by direct skin contact. It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposures should be considered.

ENGINEERING CONTROLS: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

EYE/FACE PROTECTION: Use chemical goggles.

SKIN PROTECTION: Use protective clothing chemically resistant to this material. Selection of specific items such as faceshield, gloves, boots, apron or full-body suit will depend on operation. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items, which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. For most conditions, no respiratory protection should be needed; however, if handling at elevated temperatures without sufficient ventilation, 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:

APPEARANCE: Yellow liquid, white crystals may be present

ODOR: Mild amino-like

BOILING POINT: >200°C (392°F)

VAPOR PRESSURE: ~0.3 mmHg (@68°C/154°F)

SPECIFIC GRAVITY: 1.102 mg/mL

PERCENT VOLATILITY (BY VOLUME): ~52.5%

SOLUBILITY IN WATER: Not soluble

SOLUBILITY IN ORGANICS: Soluble

10. STABILITY AND REACTIVITY:

STABILITY: (Conditions to Avoid) Stable under normal storage conditions. Avoid high temperatures to prevent evaporation.

INCOMPATIBILITY: (Specific Material to Avoid) None known.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may yield the following: isobutylene, oxides of nitrogen, and/or hydrogen chloride.

HAZARDOUS POLYMERIZATION: Not known to occur.

11. TOXICOLOGICAL INFORMATION:

MUTAENICITY: For the active ingredient, negative in mutagenicity tests. For the solvent, in-vitro mutagenicity studies were negative in some cases and positive in other cases. Animal mutagenicity studies were negative.

12. ECOLOGICAL INFORMATION:

ENVIRONMENTAL FATE:

MOVEMENT AND PARTITIONING: Based largely or completely on information for the active ingredient. Bioconcentration potential is moderate (BCF is between 100 and 3000 or the Log Pow between 3 and 5). Expected to be relatively immobile in soil (Koc is >5000). Based largely or completely on information for NMP. Bioconcentration potential is low (BCF is <100 or Log Pow <3). Potential for mobility in soil is very high (Koc is between 0 and 50).

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DEGRADATION & PERSISTENCE: Based largely or completely on information for the active ingredient. The photolysis half-life in water is 10 days. Based largely or completely on information for NMP. Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. In the Atmospheric environment, material is estimated to have a tropospheric half-life of 5.429 hours.

ECOTOXICOLOGY: Based largely or completely on information for the active ingredient. Material is moderately toxic to aquatic invertebrates on an acute basis (LC₅₀ or EC₅₀ is between 1 and 10mg/L). Material is practically non toxic to birds on an acute basis (LD₅₀ is >2000 mg/kg). Material is slightly toxic to birds on a dietary basis (LC₅₀ is between 1001 and 5000 ppm). Based largely or completely on information for NMP. Material is practically non-toxic to aquatic organisms on an acute basis (LC₅₀ or EC₅₀ is >100 mg/L in the most sensitive species tested).

13. DISPOSAL CONSIDERATIONS:

DISPOSAL METHOD: To avoid disposal, all attempts should be made to use this product completely, in accordance with its registered use. If this is not possible handle with care and dispose of in a safe manner. Empty bags or liners may retain some product residue. DO NOT REUSE. Dispose of the bag in a safe manner. Follow all applicable community, national or regional regulations regarding waste management methods.

14. TRANSPORT INFORMATION:

U.S. DEPARTMENT OF TRANSPORTATION INFORMATION:

FOR ALL PACKAGE SIZES AND MODES OF TRANSPORTATION: This material is not regulated.

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: 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
N-Methyl-Pyrrolidinone	000872-50-4	54%

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 1986 (SARA Title III) and is considered, under applicable definition, to meet the following categories:

An immediate health hazard
A delayed health hazard
A reactive 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: The product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.

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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 ACT: 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
N-Methyl-Pyrrolidinone	000872-50-4	NJ2 PA1

NJ2=New Jersey Environmental Hazardous Substance (present at greater than or equal to 1.0%).
PA1=Pennsylvania 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: 2
Flammability: 0
Reactivity: 3

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.

16. OTHER INFORMATION:

MSDS STATUS: New

The information herein is given in good faith, but no warranty, express or implied, is made. Consult Voluntary Purchasing Groups, Inc. for further information.