

MATERIAL SAFETY DATA SHEET



Emergency Phone: 866-303-6950
Cheminova, Inc.
Research Triangle Park, NC 27709

Effective Date: 4/30/2012

PROAXIS* INSECTICIDE

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT: ProAxis Insecticide

COMPANY IDENTIFICATION:

Cheminova, Inc.
P.O. Box 110566
One Park Drive, Suite 150
Research Triangle Park, NC 27709

2. COMPOSITION/INFORMATION ON INGREDIENTS:

Gamma-Cyhalothrin:	CAS # 076703-62-3	5.9%
(R)-cyano(3-phenoxyphenyl) methyl(1R,3R)-3-[(1Z)-2-chloro- 3,3,3-trifluoroprop-1-enyl]-2,2- dimethylcyclopropanecarboxylate		
Balance, Total, Including:		94.1%
Aromatic Solvent	CAS # 064742-94-5	
Contains Naphthalene	CAS # 000091-20-3	
Cellulose	CAS # 009004-34-6	

3. HAZARDOUS IDENTIFICATIONS:

EMERGENCY OVERVIEW

Beige liquid with a slight odor. May cause eye and skin irritation. Toxic to aquatic organisms.

EMERGENCY PHONE NUMBER: 866-303-6950

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, preferably 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. Items which cannot be decontaminated, including leather articles such as shoes, belts, and watchbands should be disposed of properly.

INGESTION: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

INHALATION: Move person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

NOTE TO PHYSICIAN: If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. The decision of whether to induce vomiting or not should be made by a physician. Skin contact may aggravate preexisting dermatitis. Topical application of Vitamin E oil to skin following decontamination may relieve persistent stinging. 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: >200°F (>100°C)

AUTO-IGNITION TEMPERATURE: <750°F (<400°C)

FLAMMABLE LIMITS

LFL: Not applicable

UFL: Not applicable

EXTINGUISHING MEDIA: Dry chemical or carbon dioxide for small fires, and water spray or foam for large fires.

FIRE AND EXPLOSION HAZARDS: Foam fire extinguishing system is preferred because uncontrolled water can spread possible contamination. Toxic irritating gases may be formed under fire conditions.

FIRE-FIGHTING EQUIPMENT: Use positive-pressure, self-contained breathing apparatus and full protective equipment.

6. ACCIDENTAL RELEASE MEASURES:

ACTION TO TAKE FOR SPILLS: Absorb small spills with materials such as sand, sawdust, Zorball, or dirt. Wash exposed body areas thoroughly after handling. Report large spills to Cheminova at 866-303-6950.

7. HANDLING AND STORAGE:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep out of reach of children. Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing vapors and spray mist. Handle concentrate in ventilated area. Wash thoroughly with soap and water after handling and before eating, chewing gum, using tobacco, using the toilet or smoking. Keep away from food, feedstuffs, and water supplies. Store in original container with the lid tightly closed.

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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):

Aromatic Petroleum Solvent: None established.

Supplier recommends a guideline of 100 ppm for the total product, which is a mixture of aromatic hydrocarbons.

Naphthalene: ACGIH TLV is 10 ppm TWA, 15 ppm STEL, Skin, A4. OSHA PEL is 10 ppm TWA.

Cellulose: ACGIH TLV is 10 mg/M³. OSHA PEL is 15 mg/M³ total dust, 5 mg/M³ respirable.

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 gloves chemically resistant to this material.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required, use a NIOSH approved air-purifying or positive-pressure supplied-air respirator depending on the potential airborne concentration. For emergency and other conditions where the exposure guideline may be exceeded, use a NIOSH approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply.

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

9. PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE: Beige liquid

ODOR: Slight

MELTING POINT: Below 0°C

BOILING POINT: Not applicable (decomposes)

SPECIFIC GRAVITY: ~1.01 g/mL @ 22°C

VAPOR PRESSURE:

7.73 x 10⁻¹⁰ mmHg at 20°C (gamma-cyhalothrin technical)

2.59 x 10⁻⁹ mmHg at 25°C (gamma-cyhalothrin technical)

SOLUBILITY IN WATER: Disperses in water (aqueous suspension)

10. STABILITY AND REACTIVITY:

STABILITY: (CONDITIONS TO AVOID) Stable under normal use and storage conditions.

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) Oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, hydrogen chloride, hydrogen fluoride, nitrogen oxides, hydrogen cyanide, and various chlorinated and fluorinated organic compounds.

HAZARDOUS POLYMERIZATION: Not known to occur.

11. TOXICOLOGICAL INFORMATION:

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. Corneal injury is unlikely.

SKIN: Brief contact may cause slight skin irritation with local redness. May cause drying or flaking of the skin. Prolonged skin contact is unlikely to result in absorption of harmful amounts. The LD₅₀ for skin absorption in rats for a similar material is >5000 mg/kg. Similar materials have been shown to cause allergic skin reactions when tested in guinea pigs.

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. Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia. The oral LD₅₀ for rats for a similar material is >2500 mg/kg.

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INHALATION: Prolonged excessive exposure may cause adverse effects. May cause central nervous system effects.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: For the active ingredient, excessive exposure may cause neuralgic signs and symptoms. For the solvent, in animals, effects have been reported on the following organs: respiratory tract, gastrointestinal tract, thyroid, and urinary tract.

CANCER INFORMATION: Contains naphthalene, which has caused cancer in some laboratory animals.

TERATOLOGY (BIRTH DEFECTS): The active ingredient did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother. The solvent did not cause birth defects or any other fetal effects in laboratory animals.

REPRODUCTIVE EFFECTS: For the active ingredient, in animal studies done on a similar material, has been shown not to interfere with reproduction.

MUTAGENICITY: For the active ingredient and solvent, in-vitro and animal genetic toxicity studies were negative.

12. ECOLOGICAL INFORMATION:

ENVIRONMENTAL FATE:

MOVEMENT & PARTITIONING:

Based largely or completely on information for the active ingredient and the aromatic solvent.

Bioconcentration potential is high (BCF is >3000 or Log Pow between 5 and 7).

DEGRADATION & PERSISTENCE:

Based largely or completely on information for the aromatic solvent.

Biodegradation may occur under aerobic conditions (in the presence of oxygen).

ECOTOXICOLOGY:

Based largely or completely on information for a similar material.

Material is very highly toxic to aquatic organisms on an acute basis (LC_{50} or EC_{50} is <0.1 mg/L in the most sensitive species tested).

13. DISPOSAL CONSIDERATIONS:

DISPOSAL METHOD: If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION:

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

For shipments less than 17857 pounds by all modes of transportation:

This material is not regulated for transport.

For shipments of 17857 pounds or greater by all modes of transportation:

ENVIRONMENTALLY HAZARDOUS SUBSTANCES,
LIQUID, N.O.S./(NAPHTHALENE)/9/UN3082/PG III/RQ
(NAPHTHALENE)

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.

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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
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:

This product contains a chemical(s) known to the State of California to cause cancer. During processing of our product, exposure may exceed the levels deemed to represent significant risk as defined by the emergency guidelines in 22 California Code of Regulations, Division 2, Chapter 3, Article 7. The material is naphthalene (CAS # 000091-20-3)

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
NAPHTHALENE	000091-20-3	NJ2 NJ3 PA1 PA3
CELLULOSE	009004-34-6	PA1

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

NJ3=New Jersey Workplace Hazardous Substance (present at greater than or equal to 1.0%).

PA1=Pennsylvania Hazardous Substance (present at greater than or equal to 1.0%).

PA3=Pennsylvania 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	2
Flammability	0
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#	RQ	% in Product
Naphthalene	000091-20-3	100	0.56%

RCRA CATEGORIZATION:

U. S. EPA Hazardous Waste #: Naphthalene = U165

16. OTHER INFORMATION:

MSDS STATUS: Revised Sections: N/A
Replaces MSDS Dated: N/A