

SAFETY DATA SHEET

HY-END BIFEN S

Insecticide Granules

1. IDENTIFICATION

Product name: **HY-END Bifen S insecticide granules**
 Product type: Insecticide
 EPA Registration No.: 53883-124-83996
 Chemical name of active ingredient(s): Bifenthrin: (2-methyl[1,1'-biphenyl]-3-yl)-methyl-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl cyclopropanecarboxylate
 Manufacturer/Registrant: NaturChem Inc.
 270 Bruner Road
 Lexington, SC 29072
 For fire, spill, and/or leak emergencies, contact Chemtrec: Phone: 1-800-424-9300
 Poison Control Center Phone: 1-800-222-1222

2. HAZARDS IDENTIFICATIONS

OSHA HCS CLASSIFICATION (29 CFR 1910.1200)

Acute Toxicity:

	Acute oral	Acute dermal	Acute inhalation	Eye irritation	Skin irritation	Skin Sensitization
Category	NC	NC	NC	NC	NC	NC

NC: Not classified

SIGNAL WORD: WARNING

HAZARD STATEMENTS:

- Suspected of causing cancer. (Hazard Category 2 - Crystalline Silica)

PICTOGRAM:



PRECAUTIONARY STATEMENTS:

- Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and clothing.

STORAGE AND DISPOSAL: See Section 7 and 13.

OTHER HAZARDS: See Section 11 and 12.

3. COMPOSITION/INFORMATION ON INGREDIENTS

COMMON	CAS NO.	%	OSHA PEL	ACGIH	OTHER	NTP/IARC/OSHA
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NAME				TLV		(Carcinogen)
Bifenthrin	82657-04-3	0.2	NA	NA	NA	NA
Crystalline Silica	14808-60-7	< 96	30 mg/m ³ (%SiO ₂ +2) (TWA; total dust); 10mg/m ³ (% SiO ₂ +2) (Respirable dust)	0.1 mg/m ³ (TWA; respirable fraction)	0.05mg/m ³ (REL; respirable dust) **	IARC – 1* NTP- K*

NA=Not available. NA=Not applicable.

NE= Not established; NA= Not applicable

*IARC Group 1: The agent (mixture) is carcinogenic to humans. ** NTP – Known human carcinogen

** NIOSH exposure limits

4. FIRST AID MEASURES

FIRST AID

IF ON SKIN OR CLOTHING:

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact Poison Control Center 800-222-1222 for emergency medical treatment information.

Note to Physician - This product is a pyrethroid. If large amounts have been ingested, milk, cream or other digestible fats and oils may increase absorption and so to be avoided.

5. FIRE FIGHTING MEASURES

FLASH POINT: Not applicable

FLAMMABLE LIMITS: Not applicable

EXTINGUISHING MEDIA: CO₂, foam, dry chemical.

FIRE & EXPLOSION HAZARDS: Pesticide fires have potential to emit hazardous decomposition products.

FIRE-FIGHTING PROCEDURES: Isolate fire area and evacuate downwind. DO NOT breathe gases, smoke or vapors generated. Wear self-contained breathing apparatus and full-protective gear.

HAZARDOUS DECOMPOSITION PRODUCTS: May release irritating and toxic gases due to thermal decomposition. Products of decomposition may include CO, CO₂, hydrogen chloride, and hydrogen fluoride.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO TAKE FOR SPILLS/LEAKS: Isolate and post spill area. Wear protective clothing and personal protective. Keep unprotected persons and animals out of the area. Keep material out of lakes, streams, ponds and sewer drains. Large spills should be covered to prevent dispersal. For dry material, use a wet sweeping compound or water to prevent the formation of dust. If water is used, prevent runoff or dispersion of excess liquid by diking and absorbing with a non-combustible absorbent such as clay, sand or soil. Vacuum, shovel or pump all waste material, including absorbent, into a drum and label contents for disposal.

To clean and neutralize spill area, tools and equipment, wash with a suitable solution of caustic or soda ash, and an appropriate alcohol (i.e., methanol, ethanol or isopropanol). Follow this by washing with a strong soap and water solution. Absorb, as above, any excess liquid and add to the drums of waste already collected. Repeat if necessary. Dispose of drummed waste according to the method outlined in Section 13, "Disposal Considerations".

7. HANDLING AND STORAGE

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Do not contaminate water, food, or feed by storage or disposal.

PRECAUTIONS TO BE TAKEN IN HANDLING: Do not use or store near heat, open flame or hot surfaces. Carefully open containers and after partial use close container tightly. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

PRECAUTIONS TO BE TAKEN IN STORAGE: Keep out reach of children and domestic animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. For rigid containers after partial use replace lids and close tightly. For bags after partial use, reseal opened bag by folding top down and securing.

STORAGE TEMPERATURE (MIN/MAX): Normal ambient temperatures. Avoid exposure to extreme temperatures.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

EYE PROTECTION: Protective eyewear or chemical safety glasses with side shields or chemical goggles when working in non-ventilated spaces.

SKIN PROTECTION: Long-sleeve shirt, long pants, shoes plus socks.

HAND PROTECTION: Chemical-resistant gloves.

RESPIRATOR REQUIREMENTS: All pesticide handlers must wear a respiratory protection device when working in a non-ventilated space. Use one of the following: NIOSH-approved respirator with an R, P, or HE filter or a NIOSH-approved respirator with an organic vapor (OV) cartridge or canister with any R, P, or HE prefilter.

VENTILATION: Adequate ventilation should be used to minimize the need for personal protective equipment.

WORK HYGIENIC PRACTICES: Clean water should be available to rinse eyes and skin in case of chemical exposure. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Shower at the end of the workday. **GLOVES:** Wear chemical protective gloves made of materials such as rubber or neoprene. Thoroughly wash the outside of gloves with soap and water prior to removal. Inspect regularly for leaks.

ADDITIONAL PROTECTIVE MEASURES: Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS:

Users Should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

EXPOSURE GUIDELINES: Refer to Section 3.

ENGINEERING CONTROLS: Use local exhaust at all process locations where dust may be emitted. Ventilate all transport vehicles prior to unloading.

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9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Tan granule
ODOR: Slightly musty
pH: Not available
FLASH POINT: Not applicable
BULK DENSITY: 100 lb/cu. ft

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.
CONDITIONS TO AVOID: Excessive heat and fire
HAZARDOUS DECOMPOSITION PRODUCTS: May release irritating and toxic gases due to thermal decomposition. Products of decomposition may include CO, CO₂, hydrogen chloride, and hydrogen fluoride.
HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY/IRRITATION STUDIES:

Acute Oral LD₅₀ (Rat): > 5,000 mg/kg
Acute Dermal LD₅₀(Rat): > 2,000 mg/kg
Acute Inhalation LC₅₀(Rat): Not available
Eye Irritation (Rabbit): Non-irritating
Skin Irritation (Rabbit): Non-irritating
Dermal Sensitization: Bifenthrin: May cause sensitization by skin contact

PRIMARY ROUTES OF EXPOSURE: Skin and eye contact, and inhalation.

POTENTIAL HEALTH EFFECTS: Effects from overexposure may result from either swallowing, inhaling or coming into contact with the skin or eyes. Symptoms of overexposure include bleeding from the nose, tremors and convulsions. Contact with bifenthrin may occasionally produce skin sensations such as rashes, numbing, burning or tingling. These skin sensations are reversible and usually subside within 12 hours.

MUTAGENIC POTENTIAL:

Bifenthrin: None observed.

TERATOGENIC EFFECTS:

Bifenthrin: None observed.

OTHER INGREDIENT: Crystalline silica

Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs. Silicosis may be progressive; it may lead to disability and death. Respirable crystalline silica (quartz) inhaled from occupational sources is classified as carcinogenic to humans.

CHRONIC EFFECTS: Silicosis, cancer, scleroderma, tuberculosis, nephrotoxicity and arthritis. The condition of individuals with lung disease (e.g., bronchitis, emphysema, chronic obstructive pulmonary disease) can be aggravated by exposure.

SIGNS AND SYMPTOMS OF EXPOSURE: There are generally no signs or symptoms of exposure to crystalline silica (quartz). Often, chronic silicosis has no symptoms. The symptoms of chronic silicosis, if present, are shortness of breath, wheezing, cough and sputum production. The symptoms of acute silicosis are the same; additionally, weight loss and fever are associated with acute silicosis. The symptoms of scleroderma include thickening and stiffness of the skin, particularly in the fingers, shortness of breath, difficulty swallowing and joint problems. See also Section 11 for additional detail on potential adverse health effects.

12. ECOLOGICAL INFORMATION

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ENVIRONMENTAL HAZARDS: This pesticide is extremely toxic to fish and aquatic invertebrates. Do not apply when weather conditions favor drift from treated areas. Drift and run-off treated areas may be hazardous to aquatic organisms in neighboring areas. To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Sweeping any product that lands on a driveway, sidewalk, or street, back onto the treated area of the lawn or garden will help to prevent run off to water bodies or drainage systems.

ECOTOXICOLOGICAL INFORMATION:

Aquatic Organisms Effects:

Rain trout LC₅₀: 0.00015 mg/L

Bluegill LC₅₀: 0.00035 mg/L

Daphnia magna EC₅₀: 0.0016 µg/L

Effects on Birds:

Mallard Duck LD50 (21-day): 2150 mg/kg

Bobwhite quail LD50 (21-day): 1,800 mg/kg

13. DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Do not contaminate water, food, or feed by storage or disposal. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. Dispose of excess or waste pesticide by use according to label directions, or contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Dispose of product containers, waste containers, and residues according to label instructions and local, state, and federal health and environmental regulations.

14. TRANSPORT INFORMATION

DOT CLASSIFICATION:

Not Regulated.

INTERNATIONAL TRANSPORTATION:

IMO (vessel): UN 3077, Environmentally hazardous substances, solid, N.O.S. (Bifenthrin), 9, PGIII, marine pollutant

IATA (air): UN 3077, Environmentally hazardous substances, solid, N.O.S. (Bifenthrin), 9, PGIII, marine pollutant

15. REGULATORY INFORMATION

FIFRA INFORMATION:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information for safety data sheet, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

CAUTION Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash before reuse.

SARA TITLE III CLASSIFICATION:

Section 302: Not applicable.

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Section 311/312: Acute health hazard (immediate)
Chronic health hazard (delayed)

Section 313: Bifenthrin (0.2%) CAS #:82657-04-3

CA PROPOSITION 65: Respirable crystalline silica (quartz) is classified as a substance known to the state of California to be a carcinogen.

CERCLA RQ: Not applicable

RCRA CLASSIFICATION: Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

TSCA STATUS: The ingredients of this product are listed on the TSCA inventory or are exempt.

16. OTHER INFORMATION

HAZARD RATINGS	NFPA	HMIS	
HEALTH:	1	1	0 MINIMAL
FLAMMABILITY:	0	0	1 SLIGHT
REACTIVITY:	0	0	2 MODERATE
			3 HIGH
			4 SEVERE

MSDS DATE: Revised 9-9-2014. Supersedes version dated 3-9-2007. Changes made to all sections.

The information and recommendations contained herein are based upon data believed to be correct. However, no warranty of any kind, expressed or implied, is made with respect to the information contained herein.