

Xiphosin™

February 28, 2018

SAFETY DATA SHEET

1. IDENTIFICATION

PRODUCT NAME: Xiphosin™, Xiphosin™ fungicide

DESCRIPTION: A liquid fungicide

EPA REGISTRATION NUMBER: 92647-1-92488

MANUFACTURED FOR:
AgBiome Innovations™, Inc.
P.O. Box 14069
Research Triangle Park, NC 27709

EMERGENCY TELEPHONE NUMBER:
Call CHEMTREC Day or Night
1-800-424-9300

2. HAZARDS IDENTIFICATION

WARNING:



Harmful if swallowed
Harmful if inhaled
Causes eye irritation



Very toxic to aquatic life

3. COMPOSITION / INFORMATION ON INGREDIENTS

| COMMON NAME | CHEMICAL NAME | CAS # | COMPOSITION |
|--------------|---|-------------|-------------|
| Azoxystrobin | methyl (E)-2-[[6-(2-cyanophenoxy)-4-pyrimidinyl]oxy]-α-(methoxymethylene)benzeneacetate | 131860-33-8 | 13.5% |

| | | | |
|---------------|---|------------|-------|
| Propiconazole | 1-[[2-(1,4-dichlorophenyl)-4-propyl-1,3dioxolan-2-yl]methyl]-1 <i>H</i> -1,2,3-triazole | 60207-90-1 | 11.7% |
|---------------|---|------------|-------|

4. FIRST AID MEASURES

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For medical emergencies involving this product, call CHEMTREC toll free at 1-800-424-9300.

IF SWALLOWED: Immediately call a doctor or poison control center. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. If eye irritation persists: Get medical advice/attention

5. FIRE-FIGHTING MEASURES

FLASH POINT: >100°C (>212°F)

FIRE AND EXPLOSION HAZARDS: Thermal decomposition can release irritating and toxic fumes and gases.

EXTINGUISHING MEDIUM: Water fog, foam, dry chemical or carbon dioxide (CO₂).

FIRE FIGHTING EQUIPMENT: Firefighters should be equipped with self-contained positive pressure breathing apparatus and full bunker gear.

FIRE FIGHTING INSTRUCTIONS: Evacuate area of all unnecessary personnel and fight fire from a safe distance upwind. Contain contaminated water / firefighting water; do not allow to enter drains or waterways. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water runoff.

NFPA RATINGS: Health – 1 / Flammability – 1 / Reactivity – 0

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Isolate area and keep unnecessary and unprotected personnel from entering. Wear suitable personal protective clothing and equipment as described in Section 8 of this document.

ENVIRONMENTAL PRECAUTIONS: Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.

SPILL CLEANUP: Dike spill using suitable absorbent or impervious materials such as sand or clay. Collect and contain contaminated absorbent and place in an appropriate container for disposal. Pump any free liquid into an appropriate closed container and decontaminate tools and equipment following cleanup. Collect washings for disposal.

7. HANDLING AND STORAGE

HANDLING: Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

STORAGE: Do not contaminate water, food, or feed by storage and disposal. Store in original containers only. Store in a cool, dry and well-ventilated place. Protect from excessive heat. Keep container closed when not in use. Do not store near food or feed.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

ENGINEERING CONTROLS: Facilities storing or utilizing this material should be equipped with an eyewash station and a safety shower.

PROTECTIVE CLOTHING: Applicators and other handlers must wear: long-sleeved shirt and long pants; chemical-resistant gloves such as natural rubber; shoes plus socks; and protective eyewear (goggles, face shield, or safety glasses).

GENERAL: 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: White to off white opaque viscous liquid

ODOR: Faint, slightly musty odor

FLASHPOINT: > 100°C (> 212°F)

PH: 5.9-6.9

DENSITY: 1.04-1.08 g/cm³

SOLUBILITY: Emulsifies

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Temperatures above 46°C (115°F) and high moisture.

CHEMICAL STABILITY: Stable under all normal use and storage conditions. May decompose if heated.

INCOMPATIBILITY WITH OTHER MATERIALS: Strong oxidizing agents and acids.

HAZARDOUS DECOMPOSITION PRODUCTS: This product is chemically stable and no hazardous reactions should occur if stored and handled as prescribed / indicated. In case of fire, oxides of carbon and nitrogen can be released.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

ORAL TOXICITY (RAT LD₅₀): > 1,659 mg/kg

DERMAL TOXICITY (RAT LD₅₀): > 5,000 mg/kg

INHALATION TOXICITY (RAT LC₅₀): > 0.52 mg/L and < 2.11 mg/L

EYE IRRITATION: Moderately irritating

SKIN IRRITATION: Slightly irritating

SKIN SENSITIZATION: Guinea pig – Not a contact sensitizer

CARCINOGENICITY:

EPA: Not Listed **NTP:** Not Listed

ACGIH: Not Listed **OSHA:** Not Listed

IARC: Not Listed

MUTAGENIC TOXICITY: No evidence of mutagenic effects during *in vivo* and *in vitro* assays.

REPRODUCTIVE TOXICITY: No evidence in animal studies.

The following information is for the active ingredient, Azoxystrobin:

Azoxystrobin can be persistent for several months or longer. Azoxystrobin has degradation products which have properties similar to chemicals which are known to leach through soil to groundwater under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow may result in groundwater contamination.

Azoxystrobin and propiconazole are toxic to freshwater and estuarine/marine fish; and azoxystrobin is toxic to aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in neighboring areas.

12. ECOLOGICAL INFORMATION

The following information is for the active ingredient, Azoxystrobin:

AQUATIC TOXICITY

Rainbow Trout (96-hr LC₅₀): 0.47 mg/L

Bluegill (96-hr LC₅₀): 1.1 mg/L

Daphnia (48-hr EC₅₀): 80 µg/L

Algae (120-hr EC₅₀): 0.12 mg/L

AVIAN TOXICITY

Bobwhite Quail (LD₅₀): > 2000 mg/kg

Mallard Duck (LD₅₀): > 2000 mg/kg

OTHER TOXICITY

Honey Bee (oral LD₅₀): > 25 µg/bee (oral), > 200 µg/bee (contact)

The following information is for the active ingredient, Propiconazole:

AQUATIC TOXICITY

Rainbow Trout (96-hr LC₅₀): 4.3-5.3 mg/L

Bluegill (96-hr LC₅₀): 6.4 mg/L

Daphnia (48-hr EC₅₀): 10.2 mg/L

Algae (120-hr EC₅₀): 0.020 mg/L

AVIAN TOXICITY

Bobwhite Quail (LD₅₀): 2825 mg/kg

Mallard Duck (LD₅₀): > 2510 mg/kg

OTHER TOXICITY

Honey Bee (oral LD₅₀): Not toxic to bees

13. DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: Pesticide wastes may be toxic. Improper disposal of unused pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be used according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance in proper disposal methods.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Refer to the product label for specific container disposal instructions.

14. TRANSPORT INFORMATION

US DOT (shipped by land):

CONTAINERS < 119 GALLONS (450 L): Not regulated by DOT.

CONTAINERS ≥ 119 GALLONS (450 L):

DOT SHIPPING NAME: UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. (contains Azoxystrobin/Propiconazole), 9, PG III

EMERGENCY RESPONSE GUIDE: 171

MARINE POLLUTANT: Yes

IMDG (SHIPPED BY VESSEL):

UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. (contains Azoxystrobin/Propiconazole), 9, PG III, Marine Pollutant

IATA (SHIPPED BY AIR): UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. (contains Azoxystrobin/Propiconazole), 9, PG III

15. REGULATORY INFORMATION

FIFRA –

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 required for safety data sheets, and for workplace labels of non-pesticide chemicals. The following is the hazard information as required on the pesticide label:

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION. Harmful if swallowed. Causes moderate eye irritation. Harmful if inhaled. Avoid contact with eyes or clothing. Avoid breathing spray mist. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

ENVIRONMENTAL HAZARDS

Azoxystrobin can be persistent for several months or longer. Azoxystrobin has degradation products which have properties similar to chemicals which are known to leach through soil to groundwater under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow may result in groundwater contamination. Azoxystrobin and propiconazole are toxic to freshwater and

estuarine/marine fish; and azoxystrobin is toxic to aquatic invertebrates. Do not apply directly to water except as specified on this label. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate. Notify state and/or Federal authorities if you observe any adverse environmental effects due to the use of this product.

All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide. This product is excluded from listing requirements under EPA/TSCA.

SARA TITLE III – SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES:

Not listed

SARA TITLE III – SECTION 311/312 HAZARD CATEGORIES: Immediate

SARA TITLE III – SECTION 312 THRESHOLD PLANNING QUANTITY:

The threshold planning quantity (TPQ) for this product treated as a mixture is 10,000 lbs. This product contains no ingredients with a TPQ of less than 10,000 lbs.

SARA TITLE III – SECTION 313 REPORTABLE INGREDIENTS:

Propiconazole (11.7%) (CAS No. 60207-90-1)

CERCLA REPORTABLE QUANTITY (RQ): None

CLEAN AIR ACT THRESHOLD QUANTITY (TQ): None

CALIFORNIA PROP 65 STATUS –

This product does not contain any chemicals known to the state of California to cause cancer or reproductive harm.

CANADA –

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

16. OTHER INFORMATION

History:

| | |
|-------------------|----------------------------|
| Date of issue: | February 28, 2018 |
| Version: | 1.0 |
| Revised sections: | Not applicable |
| Prepared by: | AgBiome Innovations™, Inc. |

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This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA APPROVED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

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