

Marazo™

February 28, 2018

SAFETY DATA SHEET

1. IDENTIFICATION

PRODUCT NAME: Marazo™, Marazo™ fungicide

DESCRIPTION: A liquid fungicide

EPA REGISTRATION NUMBER: 91234-25-92488

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. HAZARD IDENTIFICATION



WARNING:
Harmful if swallowed
Causes eye irritation
Causes mild skin irritation



Very toxic to aquatic life

Combustible liquid

3. COMPOSITION / INFORMATION ON INGREDIENTS

| COMMON NAME | CHEMICAL NAME | CAS # | COMPOSITION |
|---------------|---|------------|-------------|
| Propiconazole | 1-[[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl]methyl]-1,2,4triazole | 60207-90-1 | 41.8% |

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 for treatment advice. Have person sip a glass of water if able to swallow. 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 IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

IF ON SKIN OR CLOTHING: If skin irritation occurs: Get medical advice/attention.

5. FIRE-FIGHTING MEASURES

FLASH POINT: 74.4°C (166°F)

FIRE AND EXPLOSION HAZARDS: Product is flammable. Combustion may release carbon dioxide, nitrogen oxides, and/or chlorine compounds. Not likely to form an explosive mix at normal temperatures.

EXTINGUISHING MEDIUM: Carbon dioxide, dry chemical, foam, water fog.

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 – 2 / Reactivity – 0

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Wear protective equipment to prevent skin and eyes being affected. Evacuate unprotected and unnecessary personnel from area of spill. If material is leaking from a container, stop the leak only if this can be done safely.

ENVIRONMENTAL PRECAUTIONS: Prevent spillage from entering drains or watercourse.

SPILL CLEANUP: Vermiculite, sand, and soil are all suitable absorbents, especially soils high in clay. Soil can be used to form bonds to contain spillage. Contaminated soil should be collected for disposal at a suitable landfill.

7. HANDLING AND STORAGE

HANDLING: KEEP OUT OF REACH OF CHILDREN. Wear suitable Personal Protective Equipment as identified in Section 8 of this document when handling and spraying. Wash thoroughly with soap and water and before eating, drinking, chewing gum, using tobacco, or using the toilet.

STORAGE: Store in original container in secured dry storage area. Prevent cross-contamination with other pesticides and fertilizers. For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup and disposal of wastes.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Use assisted ventilation in enclosed spaces if needed, especially storage areas.

PROTECTIVE CLOTHING: Wear long sleeved shirt and long pants, chemical-resistant gloves (such as barrier laminate or viton), and shoes plus socks.

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. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Pale amber liquid

ODOR: Faint petroleum odor

FLASHPOINT: 74.4°C (166°F)

VAPOR PRESSURE: Propiconazole is very low. VP will be that of solvent.

VAPOR DENSITY: Solvent vapor is heavier than air

SPECIFIC GRAVITY: about 1.0

SOLUBILITY: Insoluble, but forms emulsion with water.

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: All sources of ignition: heat, sparks, open flame. Store in a cool place, out of direct sunlight.

CHEMICAL STABILITY: Stable under normal use ambient conditions.

INCOMPATIBILITY WITH OTHER MATERIALS: Moisture, oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Combustion may release carbon dioxide, nitrogen oxides, and/or chlorine compounds.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

ORAL TOXICITY (RAT LD50): 2,000 mg/kg

DERMAL TOXICITY (LD50): Information not available

INHALATION TOXICITY (LC50): Information not available

EYE IRRITATION: Undiluted product will cause irritation. Effects may last for some time.

SKIN IRRITATION: Undiluted product may cause irritation. Repeat contact may cause dermatitis due to removal of fats.

SKIN SENSITIZATION: Information not available

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 of reproductive toxicity has been demonstrated.

12. ECOLOGICAL INFORMATION

This pesticide is toxic to fish and shrimp.

The following information is for the active ingredient, Propiconazole:

AQUATIC TOXICITY

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

Bluegill (96-hour LC₅₀): 6.4 mg/L

Daphnia (48-hour EC₅₀): 10.2 mg/L

Algae (EC₅₀): 0.76 mg/L

AVIAN TOXICITY

Bobwhite Quail (LD₅₀): 2825 mg/kg

Mallard Duck (LD₅₀): > 5620 mg/kg

OTHER TOXICITY

Not toxic to bees.

13. DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law and may contaminate groundwater. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

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 Propiconazole), 9, PG III

EMERGENCY RESPONSE GUIDE: 171

MARINE POLLUTANT: Yes

IMDG (SHIPPED BY VESSEL):

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

IATA (SHIPPED BY AIR): UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. (contains 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. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and shrimp. Do not apply directly to water, or to areas where

surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment, washwater or rinsate.

PHYSICAL OR CHEMICAL HAZARDS

Combustible. Do not use or store near heat or open flame. Do not mix or allow coming in contact with oxidizing agent or fire retardants. Hazardous chemical reactions may occur

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 (CAS No. 60207-90-1): 41.8%

CERCLA Reportable Quantity (RQ): 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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