

Howler®

April 20, 2020

SAFETY DATA SHEET

1. IDENTIFICATION

Product Identifier: Howler®, Howler® T&O, *Pseudomonas chlororaphis* strain AFS009
 Other Means of Identification: NA
 Recommended Use: For agricultural crop, turf, ornamental, home, and garden uses.

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 CCN803914

2. HAZARDS IDENTIFICATION

GHS Classification: Not classified

Signal Word: CAUTION

Hazard Statements: None

Precautionary Statements: None

Unclassified Hazards: None

Percentage of Ingredients with Unknown Toxicity: Zero.

3. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS No.	%
<i>Pseudomonas chlororaphis</i> strain AFS009	-	50
Other proprietary ingredients	Trade secrets	50

Specific chemical identities and percentages of composition have been withheld as trade secrets.

4. EMERGENCY AND FIRST AID MEASURES

EYE CONTACT: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

INHALATION: Remove person to fresh air and keep comfortable for breathing. Call a poison center if you feel unwell.

SKIN CONTACT: If irritation develops, wash thoroughly with soap and water.

INGESTION: No data available.

MOST IMPORTANT SYMPTOMS: May cause skin and eye irritation.

IMMEDIATE MEDICAL ATTENTION NEEDED: None needed.

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: No data available.

SPECIFIC HAZARDS ARISING FROM CHEMICAL: None known.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS: None known.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES: Take all additional action necessary to prevent and remedy the adverse effects of the spill. This product should be prevented from entering bodies of water.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: In case of spill, collect material immediately. Wipe residual material from surfaces with cloth. Do not wash residues into drains or other waterways.

7. HANDLING and STORAGE

PRECAUTIONS FOR SAFE HANDLING: Avoid contact with eyes. Do not inhale.

CONDITIONS FOR SAFE STORAGE: Store in a cool, dry place in original packaging, and away from direct sunlight or heat sources

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS: 5 mg/m³.

ENGINEERING CONTROLS: When handlers use closed systems, enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

PERSONAL PROTECTION:

Applicators and other handlers must wear:

- long-sleeved shirt and long pants
- protective eyewear
- waterproof gloves
- shoes plus socks

Mixer/loaders and applicators must wear a NIOSH approved particulate respirator with any N, R, or P filter with NIOSH approval number prefix TC-84A; or a NIOSH approved powered air purifying respirator with an HE filter with NIOSH approval number prefix TC-21C. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization. Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables are available, use detergent and hot water. Keep and wash PPE separately from other laundry.

9. PHYSICAL and CHEMICAL PROPERTIES

APPEARANCE: Tan Powder

ODOR THRESHOLD: Not determined

EVAPORATION RATE: Not determined

VAPOR PRESSURE: Not determined

RELATIVE DENSITY: 0.363g/cm³

SOLUBILITY in water: Not determined

FLAMMABILITY LIMITS: Not determined

AUTO-IGNITION TEMP: 450°C

PARTITION COEFFICIENT: Not determined

ODOR: Slight fermentation odor

FLASH POINT: Not determined

FLAMMABILITY: Slightly flammable. Will burn. Class 1.

MELTING POINT: Not determined

BOILING POINT: Not determined

VAPOR DENSITY: Not determined

VISCOSITY: Not determined

pH: 7

DECOMPOSITION TEMP: Not determined

10. STABILITY and REACTIVITY

REACTIVITY: No data available.

STABILITY: No data available.

HAZARDOUS POLYMERIZATION: No data available.

CONDITIONS TO AVOID: None known.

INCOMPATIBILITY: None known.

HAZARDOUS THERMAL DECOMPOSITION PRODUCTS: No data available.

11. TOXICOLOGICAL DATA

INHALATION: None

SKIN IRRITATION: None

EYE IRRITATION: May cause eye irritation.

INGESTION: None

SENSITIZATION: No data available.

CARCINOGENICITY: No ingredients are listed by NTP, OSHA, or ACGIH as a carcinogen.

12. ECOLOGICAL INFORMATION

This product may be toxic to bees and other pollinating insects exposed to direct treatment. Do not apply this product while bees or other pollinating insects are actively visiting the treatment area. This product may be toxic to certain nontarget terrestrial arthropods. Minimize spray drift away from target area to reduce effects to nontarget insects. 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. Do not contaminate water when disposing of equipment washwater or rinsate.

13. DISPOSAL CONSIDERATIONS

Do not reuse empty container. Wrap container and put in trash.

14. TRANSPORT INFORMATION

Not regulated for transportation.

15. OTHER INFORMATION

REVISION DATE: April 20, 2020