



EmeraldBioAgriculture
3125 Sovereign Dr. Suite B
Lansing, MI 48911
(517) 882-7370 Tel.
(517) 882-7560 Fax

Material Safety Data Sheet



EPA Registration No. 70810-6

Section I - MANUFACTURER

Emerald BioAgriculture
3125 Sovereign Dr. Suite B
Lansing, MI 48911
(517) 882-7370 Tel.
(517) 882-7560 Fax

Section II - INGREDIENT INFORMATION

Chemical Name & Synonyms	N/A
Trade Name & Synonyms	BotaniGard ES
Biological Family	
Beauveria bassiana Conidia	11.3%
Inerts	88.7%

Section III - HAZARDOUS INGREDIENTS

Paints, Preservatives, Solvents:	%TLV (units)	Alloys & Metallic Coatings:
Pigments N/A		Base Metal N/A
Catalyst N/A		Alloys N/A
Vehicle N/A		Metallic Coatings N/A
Solvents N/A		Filler Metal Plus Coating or Core Flux N/A
Additives N/A		
%TLV (units)		
Others N/A		

Hazardous Mixtures of other Liquids, Solids, or Gases NONE KNOWN

Section IV - PHYSICAL DATA

Boiling Point 260°C (500°F)
Specific Gravity (H₂O = 1) 0.93
Flash Point 182°C (360°F)
pH - Essentially Neutral

Vapor Pressure (mm Hg) < 0.01 mm Hg @ 20°C
Percent Volatile by Volume (%) 1.0 - 1.4
Vapor Density (Air = 1) > 5
Evaporation Rate @ 1 ATM & 25°C (77°F) < 0.01 (Ethyl Ether = 1)
Solubility in Water Emulsifiable in Water
Appearance and Odor Amber-colored oil; mild odor

Section V - FIRE AND EXPLOSIVE HAZARD DATA

Flash Point = 182°C (360°F)

Flammable Limits

 Lol - 0.9%

 Uol - 7%

Extinguishing Media

Dry chemical; Foam and/or water fog

Plan fire protection and planned response with local fire authorities.

Specific Fire Fighting Procedures

 Use dry chemical, foam and/or water fog to extinguish the fire. Use water to keep fire-exposed containers cool. Water spray may be used to flush spills away from exposures. Full protective equipment and self-contained breathing apparatus are recommended.

Unusual Fire and Explosion Hazards NONE

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) - HAZARD IDENTIFICATION

(Note: NFPA's rating = #1 as least hazardous) Basis: Emerald BioAgriculture Recommendation

Health - 1

Flammability - 1

Reactivity - 0

Section VI - HEALTH HAZARD DATA ---- Carcinogen Status: No Listing

NTP - No

IARC Monographs - No

OSHA Regulated - No

Routes of Entry:

 Eye - Yes

 Inhalation - Yes

 Skin - Yes

 Ingestion - Yes

Eye Contact: Causes substantial, but temporary eye damage; eye irritant.

Inhalation: Potential allergen.

Ingestion: Harmful if swallowed.

Skin Contact: Excessive skin contact may cause itching.

HEALTH HAZARD (Acute and chronic)

Acute: Substantial, but temporary eye damage.

Chronic: None Known

Wear proper personal protective equipment to avoid exposure.

Use with adequate ventilation.

Emergency and First Aid Procedures:

EYES: Immediately flush eyes with large amounts of water for at least 15 minutes. Seek medical attention immediately. "Wear goggles, face shield or safety glasses when handling. **INHALATION:** Remove person to fresh air. If breathing stops," begin artificial respiration and seek medical attention immediately. Wear appropriate respiratory protection. **INGESTION:** "If swallowed, give several large glasses of water to dilute. Do not induce vomiting. **SKIN CONTACT:** Immediately flush" "with large amounts of water for at least 15 minutes. If irritation continues, seek medical attention. Wear waterproof gloves."
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: NONE KNOWN

Section VII - REACTIVITY DATA

Stability: Stable Compound. This product is stable and will not react violently with water.

Incompatibility (Materials to Avoid): Avoid contact with strong oxidants such as liquid chlorine, concentrated oxygen, sodium hypochlorite, calcium hypochlorite, etc., as this may present an explosion hazard.

Hazardous Decomposition Products: CO x
Hazardous Polymerization will not occur.

Section VIII - ENVIRONMENTAL DATA

This product contains an oil and as such, may be classified under Section 311 of the Clean Water Act and/or under the Oil Pollution Act.

Spills into or near waterways resulting in a sheen must be reported to the National Response Center (1-800-424-8802).

Steps to be Taken in Case Material is Released or Spilled

Wear protective equipment including waterproof gloves, coveralls over long-sleeved shirt, long pants and a NIOSH/MSHA- approved respirator for organic vapors. Wear chemical goggles if a half-face mask respirator is worn. For small spills, sweep up and dispose of in a D.O.T. approved waste container. For large spills, place into D.O.T. approved waste container. Keep out of sewers, storm drains, surface waters and soil. Comply with all applicable Federal, State and local requirements on spill reporting, handling and waste disposal. Water wash with strong detergent or wetting agent; Non-Toxic. Absorb with inert material (sand, earth or other absorbent.) Minimize skin contact.

Waste Disposal Method: Landfill approved

D.O.T.-approved container for disposal.
Dispose of contaminated product and materials used in cleaning up spills or leaks in a manner approved for this material Consult appropriate Federal, State and local regulatory agencies, to ascertain proper disposal procedures.
NOTE: Empty containers can have residues and mists and are subject to proper waste disposal as above.

EPA Hazard Classification Code

Acute - Hazard
Chronic - Hazard
Fire - Hazard
Pressure - Hazard
Reactive - Hazard
Not Applicable - XXX

Other Precautions:

Potentially pathogenic to honey bees. Avoid applying to areas where honey bees are actively foraging or around bee hives. This product may be toxic to fish.

Section IX - SPECIAL PROTECTION & PRECAUTIONS

Respiratory Protection: Use with adequate ventilation. Use with NIOSH/MSHA-approved respirator for organic vapors. If half-face mask is worn, chemical safety goggles should also be worn.

Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposure to a minimum.

Skin Protection: Wear waterproof gloves, safety shoes, long-sleeved shirt and long pants.

Eye Protection: Use chemical safety goggles. Contact lenses should not be worn when working with this material. Maintain an eye wash fountain and quick drench facilities in work area.

Other Protective Equipment: Coveralls over long-sleeved shirt and long pants; shoes plus socks.

Work Hygienic Practices: Wash thoroughly after handling. Minimize rubbing of eyes. Remove contaminated clothing; launder or dry clean.

CONTAINER DISPOSAL: Do not reuse as a container. Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Section IX - TRANSPORTATION AND OSHA LABEL INFORMATION

U.S. DOT HAZARDOUS MATERIALS SHIPPING DESCRIPTION: Not Regulated

NOTE: Product label may contain non-OSHA related information also.

TRANSPORTATION INCIDENT ADVISORY: For additional information, refer to the latest DOT Emergency Response guidebook.

EMERALD BIOAGRICULTURE CORPORATION believes the information and recommendations contained herein are accurate and reliable as of the date issued. Buyers and handlers of this product shall assume all risk and responsibility for potential loss or damage if this product is used, stored, handled or applied in a manner inconsistent with its registered labeling. To the extent permitted by law, manufacturer shall not be liable for more than the purchase price or the quantity involved including incidental, consequential or special damages.

For an MSDS or assistance with an MSDS, direct inquiries to the address on the front.
Date Issued: 8/14/02