

Holganix LLC – Hazard Communication Safety Data Sheet

Holganix Bio 800+ Breakdown 2-0-0

October 5, 2023

Section 1: Identification

1.1. Product Name: Holganix Bio 800+ Breakdown 2-0-0

1.2. Common Name: Bio 800+ Breakdown

1.3. Product Type: A concentrated compost tea intended to be used as an agent to break down straw on soil in No-till agricultural.

1.4. Company Name/Manufacturer:

Holganix LLC
Market Street
Aston, PA 19014-3436
866.563.2784
www.holganix.com

1.5. In an emergency contact:

- **Holganix LLC (9:00 am to 5:00 pm EST/EDT, Mon. through Fri.)** – 866.563.2784.
- **Poison Emergency:** American Association of Poison Control Centers at 1.800.222.1222.
- **Environmental Spill:** National Response Center at 1.800.424.8802.

Section 2: Hazard(s) Identification

2.1. Physical Hazard(s): Not classified.

2.2. Health Hazard(s): Not classified.

2.3. OSHA Defined Hazards: Not classified.

2.4. Product Label Warnings:

- **Hazard Symbol:** Not required.
- **Signal Word:** Not required.
- **Hazard Statement:** Not required.
- **Precautionary Statements:** No precautionary statements are required.

2.5. Eye Exposure: Immediately rinse with water.

2.6. Skin Exposure: Rinse with water, then wash with soap and water.

- **Avoid Exposure:** Wear goggles with side shields, where rubber or neoprene gloves and wear clothing to prevent repeated or prolonged skin exposure.

2.8. Hazard(s) Not Otherwise Classified (HNOC): None known.

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Section 3: Composition/Information on Ingredients

Holganix Bio 800+ Breakdown 2-0-0 is a patented, concentrated, compost tea produced by the fermentation of 100% vegetative matter. The vegetative matter used in the fermentation is composed of deciduous forest litter (Delaware and southeast Pennsylvania, USA) and vegetable garden vegetation (roots, tubers, stems, leaves, flowers, fruit, and seed). The fermentation product includes suspended microorganisms (archaea, bacteria, fungi, protozoa, and nematodes).

By qualitative and quantitative analysis, bacteria are the dominant microorganism, and the family Lactobacillaceae is the dominant family of bacteria in the product. Bacteria of the family Lactobacillaceae found in Holganix Bio 800+ Breakdown 2-0-0 include the following species: *Agrilactobacillus composti*, *Fructilactobacillus fructivorans*, *Lacticaseibacillus cameliae*, *Lacticaseibacillus manihotivorans*, *Lacticaseibacillus pantheris*, *Lacticaseibacillus paracasei*, *Lacticaseibacillus rhamnosus*, *Lactiplantibacillus pentosus*, *Lactiplantibacillus plantarum*, *Lactobacillus helveticus*, *Lactobacillus japonicus*, *Lentilactobacillus kefir*, *Lentilactobacillus parabuchneri*, *Lentilactobacillus parafarraginis*, *Lentilactobacillus kefir*, *Levilactobacillus acidifarinae*, *Levilactobacillus brevis*, *Levilactobacillus parabrevis*, *Levilactobacillus senmaizukei*, *Liquorilactobacillus ghanensis*, *Limosilactobacillus pontis*, *Loigolactobacillus coryniformis*, *Pediococcus parvulus*, *Paucilactobacillus vaccinostercus*, *Schleiferilactobacillus harbinensis*, *Schleiferilactobacillus perolens*, *Secundilactobacillus mixtipabuli* and *Secundilactobacillus similis*.

Other bacteria families that may be present in Holganix Bio 800+ Breakdown 2-0-0 include (but not limited to) Acetobacteraceae, Bacillaceae, Enterococcaceae, Flavobacteriaceae, Paenibacillaceae and Streptococcaceae.

Members of the Lactobacillaceae family of bacteria often referred to as LAB (lactic acid bacteria) have a long association with food for humans and feed for livestock. In certain food processes, such as pickling, baking, cheese making and brewing, LAB are essential agents. Pickles, sauerkraut, sourdough bread, many cheeses, beer, and wine owe their unique character to the choice of LAB selected as a recipe ingredient. These bacteria have been associated with human food for centuries. Our livestock benefit from LAB also. In this case, LAB is an addition to the process of making silage. The bacteria are critical to the process and the preservation of the finished silage product.

Holganix Bio 800+ Breakdown 2-0-0 - Guaranteed Analysis

Net Contents	Percent (%)
Total Nitrogen (N).....	2.0
Urea Nitrogen.....	0.8
Other Water Soluble Nitrogen.....	1.2

*1.2% Slowly available nitrogen from Triazone and Methylene Urea.

Derived from: Ammonium phosphate, Composted poultry litter, Muriate of potash, and Urea.

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Also Contains Non-Plant Food Ingredients in Holganix Bio 800+ Breakdown 2-0-0:

- Molasses.....14.68% contains sucrose CAS Number 57-50-1, yucca extract CAS Number 90147-57-2
- High Fructose Corn Syrup.....1.20% CAS Number 8024-45-4.
- Amino Acids.....2.08% 18 essential “L” amino acid, each with an individual CAS ..Number 17407-39-5, 7200-25-1, 3130-87-8, 617-45-8, 56-40-6, 3374-22-9, 585-221-7, 4998-57-6,3343-46-2, 328-39-2, 70-84-7, 59-51-8, 160751-44- 0, 609-36-9, 3614-08-2, 302-84-1, 134357- H96-3, 54-12-6, 55520-40-6, 516-06-3.
- Humic Acid (Leonardite)..... 0.20% CAS Number 1415-98-6.
- Fulvic Acid (Leonardite).....0.17% CAS Number 479-66-3.
- Kelp (Ascophyllum nodosum).....0.04% CAS Number 92128-82-0.

Section 4: First-Aid Measures

4.1. Description of First Aid Measures:

- **First Aid Measures After Inhalation:** Relocate to fresh air. If the nasal cavity is irritated, flush with water. Seek medical attention if irritation occurs and persists.
- **First Aid Measures After Skin Contact:** Wash skin thoroughly with mild soap and water. Seek medical attention if irritation develops or persists. Wash contaminated clothing before reuse.
- **First Aid Measures After Eye Contact:** Immediately flush with water for a period of 15 minutes while holding eyelids open. Obtain medical attention if irritation develops or persists.
- **First Aid Measures After Ingestion:** If swallowed, do not induce vomiting. Seek medical advice immediately and show the container or a copy of the label to the attending medical professional. If ingested in large amounts, **call the USA Poison Control Center at 1-800-222-1222.**

Section 5: Fire-Fighting Measures

5.1. Suitable Extinguishing Media: Holganix Bio 800+ Breakdown 2-0-0 is a water suspension of microorganisms. It is non-flammable. If the product is involved in a fire, use extinguishing media appropriate to other fire involved materials. If possible, move Holganix Bio 800+ Breakdown 2-0-0 containers to a safe location.

5.2. Unsuitable Extinguishing Media: There is no unsuitable extinguishing media.

5.3. Specific hazards arising from the hazardous product (e.g., hazardous combustion products):

Holganix Bio 800+ Breakdown 2-0-0 is not a hazardous product. There are no specific hazards arising from Holganix Bio 800+ Breakdown 2-0- 0 being involved in a fire.

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5.4. Special protective equipment and precautions for firefighters: Fire-fighters should use self-contained breathing apparatus and full protective clothing should be worn when combating chemical and/or biological fires. If possible, move Holganix Bio 800+ Breakdown 2-0-0 containers to a safe location.

Section 6: Accidental Release Measures

6.1. Personal Precautions: Wear protective clothing and use protective equipment as directed in Section 8 of this SDS.

6.2. Method and Materials for Containment and Cleaning Up:

- If this is possible without risk, stop the flow of material. o If safe to do so, prevent further leakage or spillage.
- Dike the spilled material where possible.
- Do not allow spillage to reach drains, sewers, or waterways.
- When leakage is controlled, use vermiculite, dry sand or diatomaceous earth to absorb the spill. Collect residue, place it in a container(s) and dispose of it as biological waste. o Following product recovery:
 - Flush the area with water.
 - Retain all contaminated water for removal and treatment.
 - For waste disposal, see Section 13 of this SDS.
 - Uncontaminated spilled material may be recycled for its intended use.
- If you cannot contain the spill and the contents of the spill have reached or are about to reach drains, sewers or waterways, contact local authorities immediately.

Section 7: Handling and Storage

7.1. Storage:

- Store product in refrigerated conditions between 33° F and 44° F (0.56° C and 6.67° C).
- Return partially used containers to refrigeration following loading of the spray tank.

7.2. Precautions for Safe Handling:

- Avoid splashing product in eyes and prolonged or repeated contact with skin.
- Eyewash facilities and emergency showers must be available when handling this product.
- Wear appropriate personal, protective equipment (See Section 8 of this SDS) while handling and spraying Holganix Bio 800+ Breakdown 2-0-0.
- Avoid breathing mist or vapor. o Use only in well-ventilated areas.
- Wash hands thoroughly after handling Holganix Bio 800+ Breakdown 2-0-0.

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- Holganix Bio 800+ Breakdown 2-0-0 contains living microorganisms.
 - It is possible that cells of bacteria or filaments of fungi mycelium may aggregate in the container on the surface of the product.
 - If you notice solids floating on the surface of Holganix Bio 800+ Breakdown 2-0-0, sieve the product to remove this material prior to or as you are mixing the product with water in the spray tank.
 - Sieving the product will prevent clogging of spray lines or nozzles while applying the diluted product.
- A diluted spray solution must be applied within 48 hours of diluting and mixing.
 - If not applied within 48 hours of diluting and mixing, the microorganisms may die rendering the mixture less than effective.
 - The effectiveness of microorganisms in a diluted spray solution can be extended beyond 48 hours to 30 days by aerating the spray solution in between applications of the product.

Section 8: Exposure Controls/Personal Protection

8.1. Occupational Exposure Limits: No exposure limits are noted.

8.2. Biological Limit Values: No biological limit values are noted.

8.3. Appropriate Engineering Controls:

- Adequate ventilation should be provided to avoid inhalation.
- Eyewash stations should be installed in the workplace.

8.4. Personal Protective Equipment:

- **Eye and Face Personal Protection:** While working with open containers, wear safety glasses with side shields or goggles and a face shield.
- **Skin Protection:** While working with open containers, wear rubber or neoprene gloves. Wear clothing that will provide protection from repeated or prolonged contact with chemical splashes or spills.
- **Respiratory Protection:** Not Required.

8.5. General Hygiene Considerations: Handle in accordance with good industrial hygiene and safety practice.

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Section 9: Physical and Chemical Properties

9.1. Information on Basic and Chemical Properties:

- **Appearance:**
 - **Physical State:** Liquid.
 - **Form:** Suspension.
 - **Color:** Brown.
- **Odor:** Vinegar odor.
- **Odor/Threshold:** Not available.
- **pH:** 4.0 to 4.5.
- **Melting Point/Freezing Point:** <32°F (0°C).
- **Boiling Point:** 212°F (100°C).
- **Boiling Range:** Not available.
- **Flash Point:** Non-combustible.
- **Evaporation Point:** Not available
- **Evaporation Rate:** Not available
- **Flammability (solid, gas):** Non-flammable.
- **Upper/Lower Flammability or Explosive Limits:**
 - **Flammability Limit – Lower:** Non-flammable.
 - **Flammability Limit – Upper:** Non-flammable.
 - **Explosive Limit – Lower:** Not explosive.
 - **Explosive Limit – Upper:** Not explosive.
- **Vapor Pressure:** Not available.
- **Vapor Density:** Not available.
- **Relative Density:** Not available.
- **Solubility(s):**
 - **Solubility, Water:** Soluble.
- **Partition Coefficient (n-octanol/H₂O):** Not available.
- **Auto-Ignition Temperature:** Non-flammable.
- **Decomposition Temperature:** Not available.
- **Viscosity:** Not available
- **Other Information:**
- **Bulk Density:** 8.551 lb/gal.
 - **VOC:** Not available.
 - **Specific Gravity:** Not available.

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Section 10: Stability and Reactivity

10.1. Reactivity: This product is stable and non-reactive under normal use, storage, and transport conditions.

10.2. Chemical Stability: This product ferments if left in concentrated form above 44°F (6.7°C). Packages are vented to permit off gassing.

10.3. Possibility of Hazardous Reactions: There are no dangerous reactions known under normal conditions of use.

10.4 Conditions to Avoid: Do not store Holganix Bio 800+ Breakdown 2-0-0 at temperatures below 33°F (0°C) or above 44°F (6.7°C).

10.5. Incompatible Materials: Visit the Holganix website (www.holganix.com) to review a list of compatible/incompatible products.

10.6. Hazardous Decomposition Products: None known.

Section 11: Toxicological Information

11.1. Information on the Likely Routes of Exposure:

- **Inhalation:** Airborne particles and/or mist may be irritating to the respiratory system.
- **Skin Contact:** Skin contact is known to cause mild, transient skin irritation.
- **Eye Contact:** No known eye effects.
- **Ingestion:** No known effects of ingestion.

11.2. Symptoms Related to Physical, Chemical and Toxicological Characteristics: Mild, transient skin irritation may result from skin contact.

- **Skin Corrosion/Irritation:** May cause skin irritation.
- **Serious Eye Damage/Eye Irritation:** No known eye damage or irritation.
- **Respiratory or Skin Sensitization:**
 - **Respiratory Sensitization:** Not classified.
 - **Skin Sensitization:** Not classified.
- **Acute Toxicity:**
 - **Dermal LD50:** Not classified.
 - **Oral LD50:** Not classified.

11.4. Description of Delayed, Immediate or Chronic Effects from Short- and Long-Term Exposure:

- **Germ Cell Mutagenicity:** Not classified.
- **Carcinogenicity:** Not classified as a carcinogen by IARC, ACGIH, or OSHA.

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- **OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):** Not listed.
- **Reproductive Toxicity:** Not classified.
- **Specific Target Organ Toxicity (Single Exposure):** Not classified.
- **Specific Target Organ Toxicity (Repeated Exposure):** Not classified.
- **Aspiration Hazard:** Based on available data, the classification criteria are not met.
- **Chronic Effects:** Prolonged inhalation may be harmful. No evidence of potential chronic effects.
- **Further Information:** No other specific acute or chronic health impacts were noted.

Section 12: Ecological Information

12.1. Eco-toxicity: Holganix Bio 800 Breakdown 2-0-0 is not classified as environmentally hazardous.

12.2. Persistence and Degradability: Components of Holganix Bio 800+ Breakdown 2-0-0 are living microorganisms and organic chemistry known to be present in soils.

- **Microorganisms:** The microorganisms in the product will not degrade, but will increase or decrease in the soil microbiome according to environmental conditions and competition from native microorganisms.
- **Organic chemicals:** The organic chemicals in the product will degrade and/or be consumed by soil microorganisms.

12.3. Bio-accumulative Potential: The microorganisms and bio-chemicals found in Holganix Bio 800+ Breakdown 2-0-0 are all naturally occurring and found in soil. There is no bio-accumulative effect.

12.4. Mobility in Soil:

- The microorganisms in the product are not soluble. Some will be bound to soil particles or organic chemistry in the soil. Others will wash out of the rhizosphere (soil associated with roots) but are not likely to multiply as their source of food is provided by plant roots in the rhizosphere. Microorganisms that stay in the rhizosphere will multiply and accumulate if species' consistent growth requirements are met. Regardless of this, accumulation is not expected to exceed the life of the plant roots as the roots are the source of many of the species' growth requirements.
- The biochemicals in the product and/or produced by the microorganisms are not likely to accumulate as they are life chemicals produced and consumed by plants, microorganisms, and other life forms in the soil.

12.5. Other adverse effects: There are no known adverse effects of using Holganix Bio 800+ Breakdown 2-0-0.

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Section 13: Disposal Considerations

13.1. Disposal Instructions: Dispose in accordance with local, state, and federal laws and regulations at the time of disposal. Do not allow contents of the package to drain into sewers or water sheds.

13.2. Hazardous Waste Code: Assignment of a waste code should be discussed amongst the producer, user and the waste disposal company(s).

13.3. Waste from Residues/Unused Products: Empty containers may still contain product or residue. See (Disposal Instructions in this Section 13 of the SDS).

Section 14: Transport Information

14.1. In Accordance with Department of Transportation (DOT): Not regulated for transport.

14.2. In Accordance with International Maritime Dangerous Goods Code (IMDG): Not regulated for transport.

14.1. In Accordance with International Air Transport Association (IATA): Not regulated for transport.

Section 15: Regulatory Information

15.1. US Federal Regulations:

- **CAC (Clean Air Act) Section 112 Hazardous Air Pollutants (HAPs) List:** Not regulated.
- **CAC Section 112(r) Accidental Release Prevention (40 CFR 68.130):** Not regulated.
- **CERCLA Hazardous Substance List (40 CFR 302.4):** Not listed.
- **OSHA Hazard Communication Standard (29 CFR 1910.1200):** Hazardous chemical.
- **OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):** Not listed.
- **Super Fund Amendments and Reauthorization Act (SARA) of 1986:**
 - **Hazard Categories:**
 - **Immediate Hazard:** Yes.
 - **Delayed Hazard:** No.
 - **Fire Hazard:** No.
- **SARA 302 Extremely Hazardous Substance:** Not listed.
- **SARA 304 Emergency Release Notification:** Not regulated.
- **SARA 311/312 Hazardous Chemical:** Yes.
- **SARA 313 TRI Reporting:** Not listed.
 - **Pressure Hazard:** No.
 - **Reactivity Hazard:** No.
- **Safe Drinking Water Act (SDWA):** Not regulated.
- **TSCA Section 12(b), Export Notification, (40 CFR 707, Subpt. D):** Not regulated.

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Section 16: Other Information

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List of Abbreviations:

ACGIH:	American Conference of Government Industrial Hygienists.
C:	Celsius.
CAC:	Clean Air Act.
CAS:	Chemical Abstracts Service.
CERCLA:	Comprehensive Environmental Response Compensation and Liability Act.
CFR:	Code of Federal Regulations.
cfu:	Colony forming units.
DOT:	Department of Transportation.
GRAS:	Generally Recognized As Safe.
HNOC:	Hazard Not Otherwise Classified.
F:	Fahrenheit
FDA:	Food and Drug Administration.
IARC:	International Agency for Research on Cancer.
LD50:	Lethal Dose 50%.
OSHA:	Occupational Safety and Health Administration.
SARA:	Super Fund Amendments and Reauthorization Act.
SDWA:	Safe Drinking Water Act.
SDS:	Safety Data Sheet.
TSCA:	Toxic Substances Control Act.
VOC:	Volatile Organic Compound.

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