

Holganix LLC – Hazard Communication Safety Data Sheet

Holganix Bio 800+ Golf

May 18, 2022

Emergency Telephone Contacts:

Holganix LLC (9:00 am to 5:00 pm EST/EDT) – 866.563.2784

National Response Center – 800.424.8802

Poison Control Center – 800.222.1222

Section 1: Identification

Product Name: Holganix Bio 800+ Golf.

Common Name: Bio 800+ Golf.

Product Type: a concentrated, compost tea for use as a soil amendment on golf courses and other sports fields.

Holganix LLC

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www.holganix.com

Section 2: Hazard(s) Identification

- **Physical Hazard(s):** Not Classified.
- **Health Hazard(s):** Not Classified.
- **OSHA Defined Hazards:** Not Classified.
- **Product Label Warnings:**
 - **Hazard Symbol:** Not required.
 - **Signal Word:** Not required.
 - **Hazard Statement:** Not required.
 - **Precautionary Statements:** No precautionary statements are required.
- **Eye Exposure:** Immediately rinse with water.
- **Skin Exposure:**
 - **Avoid Exposure:** Wear goggles with side shields, where rubber or neoprene gloves and wear clothing to prevent repeated or prolonged skin exposure.
- **Hazard(s) Not Otherwise Classified (HNOC):** None known.

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Section 3: Composition/Information on Ingredients

Holganix Bio 800+ Golf is a patented, concentrated, compost tea. The dominant bacteria family in Holganix Bio 800+ Golf is *Lactobacillaceae* (genera *Lactobacillus* and *Pediococcus*). Many of the species in the *Lactobacillus* and *Pediococcus* are GRAS (Generally Recognized as Safe)/by the U. S. FDA (U. S. Food and Drug Administration). These bacteria are used in food (sauerkraut, pickles, olives, cheese, probiotics, etc.) and beverages (beer and wine) for human consumption and fermented feed for livestock (silage).

• Mixtures in Holganix Bio 800+ Golf

- Holganix Bio 800+ Golf a patented, concentrated, compost tea contains suspended microorganisms. This mixture of microorganisms includes archaea, bacteria, fungi, protozoa and nematodes. By qualitative and quantitative analysis, bacteria are the dominant species.
- There are 6.9×10^7 cfu per ml bacteria of the family *Lactobacillaceae* in Holganix Bio+ 800 Golf. These bacteria include *Lactobacillus acidifarinae*, *L. brevis*, *L. cameliae*, *L. fructivorans*, *L. japonicus*, *L. kefir*, *L. manihiotivorans*, *L. pantheris*, *L. parabrevis*, *L. parabuchneri*, *L. parafarraginis*, *L. parakefiri*, *L. pentosus*, *L. plantarum*, *L. pontis*, *L. rhamnosus*, *L. senmaizukei*, *L. similis*, *L. ultuniensis*, *L. zeae*, *Pediococcus argentanicus*, *P. cellicola* and *P. clausseii*.
- Many of the species in the genera *Lactobacillus* and *Pediococcus* are GRAS (Generally Recognized as Safe)/by the U. S. FDA (U. S. Food and Drug Administration).
- Other bacteria families that may be present in Holganix Bio+ 800 Golf include (but are not limited to) *Acetobacteriaceae*, *Bacillaceae*, *Enterococcaceae*, *Flavobacteriaceae*, *Leuconostocaceae*, *Paenibacillaceae* and *Streptococcaceae*.
- Other soil microorganisms in this product may include archeae fungi, yeasts, protozoa and nematodes.
- Ingredients in in Holganix Bio+ 800 Golf:
 - Water.....87.46% CAS # 7732-18-5.
 - Molasses.....12.03% contains yucca extract - CAS # 90147-57-2
 - Humic Acid.....0.20% CAS # 1415-98-6.
 - Amino Acids.....0.20% 18 essential "L" amino acid, each with an individual CAS # - 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, 134357-96-3, 54-12-6, 55520-40-6, 516-06-3.
 - Kelp.....0.06%.
 - Fulvic Acid.....0.05% CAS # 479-66-3.

Section 4: First-Aid Measures

- **Eye Contact:** Immediately flush with water for a period of 15 minutes. If eye irritation develops and persists, get medical attention.
- **Skin Contact:** First rinse the exposed area then wash thoroughly with soap and water. Seek medical attention if symptoms develop or irritation persists. Launder contaminated clothing before wearing again.
- **If Inhaled:** Relocate to fresh air. If nasal cavity is irritated, flush with water. Seek medical attention if irritation occurs and persists.

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4: First-Aid Measures, Continued

- **If Ingested:** Rinse mouth with water and drink 8 to 16 fluid ounces of water. Do not induce vomiting. Get medical attention if irritation occurs and persists. Call the Poison Control Center (**1.800.222.1222**) if ingested in large amounts. If vomiting occurs, lower the head to keep vomit from being swallowed

Section 5: Fire-Fighting Measures

- **Fire and Explosion Hazards:** non-combustible, not an explosion hazard.
- **Hazardous Combustion Products:** none.
- **Special Firefighting Procedures:** Self-contained breathing apparatus and full protective clothing should be worn when combating chemical and/or biological fires.
- **Protective Equipment and Firefighting Procedures:** Self-contained breathing apparatus and full protective clothing should be worn when combating chemical and/or biological fires. Use personal protective equipment and follow firefighting procedures appropriate to workplace conditions.
- **Firefighting Equipment and Instructions:** Use standard firefighting equipment. Consider hazards from other fire involved materials. If possible, move nearby containers to a safe location.

Section 6: Accidental Release Measures

- **Personal Precautions:** Wear protective clothing as directed in Section 8 of this SDS.
- **Environmental Precautions:** Prevent further leakage if safe to do so. Do not contaminate water.
- **Method of Containment:** Stop the flow of material if this is possible without risk. Dike the spilled material where possible. Prevent further leakage or spillage if safe to do so. Do not allow spillage to reach drains, sewers or waterways. If you cannot contain the spill and the content of the spill has reached or is about to reach drains, sewers or waterways, contact local authorities immediately.
- **Method of Cleaning Up:**
 - **Small Spill:** Wear rubber gloves. Absorb spill with paper or cloth. Place the contaminated paper or cloth in an appropriate disposal container. Thoroughly clean the surface to assure that all remaining contaminant is removed.
 - **Large Spill:** Contain and/or absorb the spill with inert material (e.g. sand, vermiculite, etc.), then place in a suitable container. Do not flush to sewer or allow the spill to enter waterways. 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 reused.

Section 7: Handling and Storage

- **Storage:**
 - Store product in refrigerated conditions between 33° F and 44° F.
 - Return partially used containers to refrigeration following loading of the spray tank.

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7: Handling and Storage, Continued

- **Handling:**
 - While handling Holganix Bio 800+ Golf, avoid splashing product in eyes and prolonged or repeated contact with skin.
 - Eye wash facilities and emergency shower 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+ Golf.
 - Avoid breathing mist or vapor.
 - Use only in well ventilated areas.
 - Do not use in areas without adequate ventilation.
 - Wash thoroughly after handling.
 - Holganix Bio 800+ Golf contains living microorganisms. It is possible that cells of bacteria or filaments of fungi mycelium may aggregate. If you notice this, sieve the Holganix Bio 800+ Golf prior to or as you are mixing the product with water. Sieving the product will prevent clogging of spray lines or nozzles while applying the diluted product.
 - Diluted spray solution must be applied within 48 hours of diluting and mixing. If this is not done, microorganism 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 product..

Section 8: Exposure Controls/Personal Protection

- No special precautions are required while handling or spraying Holganix Bio 800+ Golf.
- **Occupational Exposure Limits:** No exposure limits are noted.
- **Biological Limit Values:** No biological limit values are noted.
- **Appropriate Engineering Controls:** Adequate ventilation should be provided to avoid inhalation. Eyewash stations should be installed in the workplace.
- **Personal Protective Equipment:**
 - **Eye and Face 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.
- **General Hygiene Considerations:** Handle in accordance with good industrial hygiene and safety practice.

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Section 9: Physical 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 (similar to water).
- **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:** 9.125 lb/gal.
 - **VOC:** Not available.
 - **Specific Gravity:** Not available.

Section 10: Stability and Reactivity

- **Reactivity:** This product is stable and non-reactive under normal use, storage and transport conditions.
- **Chemical Stability:** This product ferments if left in concentrated form above 44°F (6.7°C). Packages are vented to permit off gassing.
- **Possibility of Hazardous Reactions:** There are no dangerous reactions known under normal conditions of use.

Section 10: Stability and Reactivity, Continued

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- **Conditions to Avoid:** Do not store Holganix Bio 800+ Golf at temperatures below 33°F (0°C) or above 44°F (6.7°C).
- **Incompatible Materials:** None known.
- **Hazardous Decomposition Products:** None known.

Section 11: Toxicological Information

- **Information on 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.
- **Symptoms Related to the Physical, Chemical and Toxicological Characteristics:** Mild, transient skin irritation may result from skin contact.
- **Acute Toxicity:**
 - **Dermal LD50:** Not classified.
 - **Oral LD50:** Not classified.
- **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.
- **Germ Cell Mutagenicity:** Not classified.
- **Carcinogenicity:** Not classified as a carcinogen by IARC, ACGIH, or OSHA.
 - **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

- **Eco-toxicity:** Holganix Bio 800+ Golf is not classified as environmentally hazardous.
- **Persistence and Degradability:** Components of Holganix Bio 800+ Golf 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.

Section 12: Ecological Information, Continued

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- **Organic chemicals:** The organic chemicals in the product will degrade and/or be consumed by soil microorganisms.
- **Bio-accumulative Potential:** No data is available.
- **Partition Coefficient – n-octanol/water (logKow):** No data is available.
- **Mobility in Soil:**
 - Chemical components of this product are water soluble and will disperse in soil water.
 - Some microorganisms in this product are mobile and will move in soil through soil water.

Section 13: Disposal Considerations

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

Transportation of this product is not regulated.

Section 15: Regulatory Information

- **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

Issue Date: February 1, 2018

Revision Date: May 18, 2022

Version #: 01

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.

Disclaimer: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. Holganix LLC makes no warranties, expressed or implied, including, but not limited to, any implied merchantability or fitness for a particular purpose or course of performance or usage of trade. User is responsible for determining whether this product is fit for a particular purpose and suitable for the user's method of use or application and assumes the risk of use thereof. The conditions and use of this product are beyond the control of Holganix LLC and Holganix LLC disclaims any liability for loss or damage incurred in connection with the use or misuse of this product. Each user should review the recommended industrial hygiene and safe handling procedures.