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SECTION 1: IDENTIFICATION

- 1.1. Product Name: Holganix PB1 LTO 10-0-0.
- **1.2. Common Name:** 10-0-0 with microbial soil amendments.
- 1.3. Product Type: a fertilizer and soil amendment.

1.4. Company Name:

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

1.5. In an emergency contact:

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. Signal Word (GHS-US):	Warning.		
2.2. Hazard Statements (GHS-US):	H320 H332	Causes eye irritation. May be armful if inhaled.	
2.3. Precautionary Statements (GHS-U	P264 P271	Avoid breathing dust/fume/gas/mist/vapors/spray. Wash hands thoroughly after handling with plenty of soap and water. Use only outdoors or in a well-ventilated area.	
attenti		Exposed or concerned, seek medical advice or	
	P312	Call a poison center (American Association of Poison Control Centers at 800.222.1222) or physician if you feel unwell.	
	P337	If eye irritation persists, seek medical advice or	
attention.			
	P351	If skin irritation occurs, rinse cautiously with water for several minutes.	
	P501	Dispose of container in accordance with federal, state and local regulations.	
2.4. Physical Hazard(s):	Not cla	Not classified.	
2.5. Health Hazard(s):	Not classified.		

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2.6. OSHA Defined Hazards:	Not classified.
2.7. Product Label Warnings:	Hazard Symbol - None required.
2.8. Hazard(s) Not Otherwise Classified (HNOC):	None known.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Substance – Fertilizer (10-0-0 derived from methylene and triazone urea) (no CAS #).The guaranteed analysis is total nitrogen (N)...6.0% slowly available N from methylene and triazone urea...4.0% urea nitrogen. Soil amending ingredients include: poly-L-aspartic acid...13.0%, black strap molasses...6.7%, sorbitol...2.8% and humic acid (peat based)...0.5%. *Inert ingredients...76.0%*. **Plant growth promoting bacteria** include *Bacillus licheniformis...1,000,000* colony forming units (cfu)/ml, *B. megaterium...*1,000,000 cfu/ml, *B. pumilus...*1,000,000 cfu/ml, *B. subtilis...*1,000,000 cfu/ml, *Paenibacillus mucilaginosus...*1,000,000 cfu/ml, *Psuedomonas* spp....1,000,000 cfu/ml and *Trichoderma* spp....1,000,000 cfu/ml.

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures:

First Aid Measures After Inhalation: Evacuate to a well ventilated and non-exposed area. First Aid Measures After Skin Contact: Wash skin thoroughly with mild soap and water. Obtain 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.

4.2. Most Important Symptoms and Effects, Both Acute and Delayed:

Symptoms/Injuries After Inhalation: Overexposure may be irritating to the respiratory system.
 Symptoms/Injuries After Skin Contact: May cause skin irritation.
 Symptoms/Injuries After Eye Contact: May cause eye irritation.
 Symptoms/Injuries After Ingestion: If a large quantity has been ingested, a person may experience abdominal pain, diarrhea, nausea and/or vomiting.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed:

If medical advice or care is needed, have a product container of copy of label at hand. Call the **Poison Control Center (800.222.1222)** if ingested in large amounts. If vomiting occurs, lower the head to keep vomit form being swallowed.

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SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media (a.) Suitable Extinguishing media: Extinguish with water, fog, foam, and/or carbon dioxide. (b.) Unsuitable Extinguishing media: Avoid direct stream of water to extinguish. 5.2 Special Protective Equipment for firefighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a ful-face piece operating in positive pressure mode. 5.3 General fire hazards This product is not flammable.

5.1. Extinguishing Media:

Suitable Extinguishing Media: Product is not considered flammable but will burn at high temperatures. Use extinguishing media appropriate for surrounding fire. **Unsuitable Extinguishing Media:** None known.

5.2. Special Hazards Arising From the Substance or Mixture:

Fire Hazard: Thermal decomposition can lead to a release of irritating and toxic gases and vapors. In event of a fire, do not breathe fumes. Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full-face piece operating in positive pressure mode.

Explosive Hazard: Product itself is not explosive.

Reactivity: This product is non-reactive.

5.3. General Fire Hazards:

This product is not flammable.

SECTION 6: ADDIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures and General Measures:

Handle in accordance with good industrial hygiene and safety practices.

For Non-emergency Personnel:

Protective Equipment: Wear suitable protective clothing, gloves, and eye/face protection as directed in Section 8 of this Safety Data Sheet (SDS).

Emergency Procedures: Contain the spillage preventing and leakage to sewers, drainage systems and/or waterways.

For Emergency Responders:

Protective Equipment: Wear suitable protective clothing, gloves, and eye/face protection as directed in Section 8 of this SDS.

Emergency Procedures: If possible, stop the flow of product. Contain the spillage preventing and leakage to sewers, drainage systems and/or waterways.

6.2. Environmental Precautions: Prevent further release of material if safe to do so. Prevent spillage into waterways. If spillage reaches waterways, notify municipal and state environmental agencies.

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6.3. Method of Containment: Stop the flow of material if this is possible without risk. Dike the spilled material where it is. Prevent further leakage or spillage if safe to do so. Do not allow spillage to reach drains, sewers or waterways. If this is not possible, contact local authorities.

6.4. Method of Cleaning Up:

For Containment: Contain and collect fluids with absorbent materials such as clay granules or vermiculite. Do not allow product to spill over into drains or water ways or dispose of product where ground or surface waters may be affected.

Methods for Cleaning Up: Recover the product by vacuuming, shoveling and/or sweeping. Avoid generation of dust during clean-up of spills

6.5. Disposal of Contaminated Product: Contaminated material should be disposed of as recommended in Section 13 of this SDS.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling:

Additional Hazards When Processed: This product is a nitrogen containing fertilizer. Runoff to water may promote undesired plant growth in waterways.

Precautions for Safe Handling: Handle in accordance with good industrial hygiene and safety procedures. Wear recommended personal protective equipment as described in Section 8 of this SDS.

7.2. Conditions for Safe Storage, Including Any Incompatibilities: Storage Conditions: Store in a cool, dry place. Prevent from freezing Prohibitions on Mixed Storage: See Section 10 of this SDS. Special Rules on Packaging: None specified.

7.3. Specific End Use: This product is intended for use as a fertilizer and soil amendment.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters:

Not known.

8.2. Exposure Controls:

Appropriate Engineering Controls: Ensure all federal, state and local regulations are observed.

8.3. Personal Protective Equipment: Wear cloves and appropriate protective clothing to avoid contact with product or spray solution on skin. If ventilation is insufficient, wear respiratory protection. To protect eyes from particulates and/or spray mist, wear safety glasses or goggles.

Hand Protection: Protective gloves.

Eye Protection: Safety glasses or goggles.

Skin and Body Protection: Wear clothing that prevents product contact with skin.

Respiratory Protection: To avoid inhalation, NIOSSH approved respiratory protection should be worn.

Environmental Exposure Controls: Ensure adequate ventilation is provided, especially in confined areas.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic and Chemical Properties:

Physical State:	Liquid.			
Appearance:	Fluid liquid.			
Color:	Brown.			
Odor:	Slight, sweet.			
Odor Threshold:	N/A.			
pH:	7.0 to 7.5.			
Relative Evaporation Rate (butyl acetate = 1): N/A.				
Melting Point:	N/A.			
Freezing Point:	N/A.			
Boiling Point:	N/A.			
Flash Point:	N/A.			
Auto-ignition Temperature:	No data available.			
Decomposition Temperature:	No data available.			
Flammability (solid, gas):	No data available.			
Vapor pressure:	N/A.			
Relative Vapor Density at 20° C:	No data available.			
Specific Gravity:	1.17.			
Weight per gallon:	9.8 lb/gal.			
Solubility – Water:	100% soluble.			
Partition Coefficient: n-octanol/water : No data available.				
Viscosity:	N/A.			

9.2. Other Information: No additional information available.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: This product is stable and non-reactive under conditions of usage, storage and transportation.

10.2. Chemical Stability: Stable at standard temperature and pressure.

10.3. Possibility of Hazardous Reactions: None known.

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10.4 Conditions to Avoid: Store under cool conditions. Do not allow to freeze.

10.5. Incompatible Materials: None known.

10.6. Hazardous Decomposition Products: None known.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on the Likely Routes of Exposure:

Inhalation: Airborne mist may be irritating to the respiratory system.
Skin Contact: Skin contact may cause minor skin irritation.
Eye Contact: Exposure to spray mist dust (during spill cleanup) may cause eye irritation.
Inhalation: Inhalation to spray mist dust (during spill cleanup) may cause respiratory irritation.
Ingestion: May be harmful if swallowed.

11.2. Description of Delayed, Immediate or Chronic Effects from Short and Long Term Exposure: Symptoms Related to the Physical, Chemical and Toxicological Characteristics

Germ Cell Mutagenicity: Not classified Carcinogenicity: Not classified. Reproductive Toxicity: Not classified. Specific Target Organ Toxicity (Single Exposure): May cause respiratory irritation. Specific Target Organ Toxicity (Repeated Exposure): Not classified. Aspiration Hazard: Not classified.

11.3. Numerical Measure of Toxicity: Not available.

11.4. Description of Symptoms:

Symptoms/Injuries After Inhalation: Over exposure may be irritation to the respiratory system.
Symptoms/Injuries After Skin Contact: May cause skin irritation.
Symptoms/Injuries After Eye Contact: May cause eye irritation.
Symptoms/Injuries After Ingestion: Ingestion of a large quantity may cause abdominal pain, diarrhea, nausea and/or vomiting.

11.5. Carcinogenicity:

National Toxicology Progam (NTP) Report on Carcinogens: Not listed.Agency for Research on Cancer (IARC) Monographs: Not found to be a potential carcinogen.OSHA: Not found to be a potential carcinogen.

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SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity: This product contains nitrogen. It may be harmful to aquatic life with short term effects causing algal blooms.

- 12.2. Persistence and Degradability: Largely biodegradable.
- **12.3. Bio-accumulative Potential:** No bioaccumulation is expected.
- **12.4. Mobility in Soil:** No information available.
- **12.5. Other Adverse Effects:** No information available.

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: This product is not subject to Hazardous Waste Codes.

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: This product is not federally registered as a hazardous material. This product does not contain any substances regulated as pollutants pursuant to the US Clean Water Act.

15.2. US State Regulations: This product is not regulated by any state as a hazardous material.

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SECTION 16: OTHER INFORMATION

16.1. Other Information: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200. It is correct to the best of our knowledge, information and belief at the date of publication. The information is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or product specification.

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 ae 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.