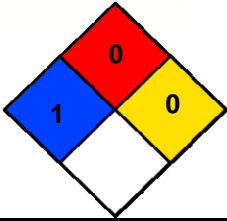




SAFETY DATA SHEET

Probiotic Solutions® MicroPlex-HS

Rev A 1 -10-14



HMIS	
HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PPE	A

SECTION 1: CHEMICAL PRODUCT & COMPANY IDENTIFICATION

PRODUCT IDENTIFIER:	Probiotic Solutions® MicroPlex-HS	Product #951
GENERAL USE:	Used in sludge, compost, contaminated soils and wastewaters to suppress hydrogen sulfide odors and enhance biodegradation and contaminant removal where oxygen is of limited availability.	
PRODUCT DESCRIPTION:	A tan liquid having a slight organic odor.	
INFORMATION PROVIDED BY:	Bio Huma Netics 1331 W Houston Avenue Gilbert, AZ 85233	EMERGENCY PHONE NUMBERS
For SDS call:	PHONE: (480) 961-1220	CHEMTREC: (In the USA) 800-424-9300 (International) 703-527-3887

SECTION 2: HAZARDS IDENTIFICATION

HAZARDS OVERVIEW: A tan, slightly acidic liquid having a slight organic odor. The liquid and mists may be irritating to the eyes and skin. Inhalation of mists may be irritating to the entire respiratory tract. Ingestion of this product may cause gastrointestinal irritation.



CLASSIFICATION: HAZARD CATEGORY 2B and 1A

SIGNAL WORD: WARNING

HAZARD STATEMENT: H320 – Causes eye irritation, H317 May cause an allergic skin reaction

PRECAUTIONARY STATEMENT: P261 - Avoid breathing fumes or vapors.

P264 - Wash hands thoroughly after handling.

P272 - Contaminated work clothing should not be allowed out of the workplace.

P280 - Wear protective gloves.

P302 + P352 - IF ON SKIN: Wash with soap and plenty of water.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P333 + P313 - If skin irritation or rash occurs, get medical advice/attention.

P337 + P313 - If eye irritation persists, get medical advice/attention.

P362 + P364 - Take off contaminated clothing and wash it before reuse.

P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

SECTION 3: COMPOSITION & INFORMATION ON INGREDIENTS

COMPONENT	CAS #	OSHA HAZARD	WT %	ACGIH		OSHA	
				TLV _(TWA)	STEL	PEL _(TWA)	STEL
Microbial Suspension in aqueous medium	NA	None	100	None	None	None	None

SECTION 4: FIRST AID MEASURES

INHALATION: Remove individual to fresh air. If allergic response or difficulty breathing is exhibited, seek medical attention.

EYE CONTACT: In case of contact, immediately flush eyes with plenty of clean running water for at least 15 minutes, lifting the upper and lower lids occasionally. Remove contact lenses, if worn. Get medical attention if irritation persists.

SKIN CONTACT: In case of contact, flush skin with plenty of clean running water. Remove contaminated clothing and shoes and wash before reuse. If irritation occurs and persists, get medical attention.

INGESTION: If swallowed, drink water, if symptoms persist consult a physician.

NOTE TO PHYSICIANS: Based on component information, this product is slightly toxic by ingestion. If a large amount is ingested, consideration should be given to careful endoscopy as stomach or esophageal irritation may occur, with possible central nervous system effects following absorption into the blood stream. Careful gastric lavage with an endotracheal tube in place should be considered. Treat exposure symptomatically.

SECTION 5: FIRE FIGHTING MEASURES

Flashpoint and Method: This product does not flash.

Flammable Limits (in air, % by volume) **Lower:** No data available **Upper:** No data available

Autoignition Temperature: Not determined

GENERAL HAZARD: This product is an aqueous organic compound. The Uniform Fire Code health hazard classification for this product is: **Irritant**.

FIRE FIGHTING INSTRUCTIONS: **EXTINGUISHING MEDIA:** Water fog, foam, CO₂ or dry chemicals.
Use a water fog or spray to cool the containers exposed to the heat of a fire.

FIRE FIGHTING EQUIPMENT: Fire fighters should wear full protective equipment, including self-contained breathing apparatus.

HAZARDOUS COMBUSTION PRODUCTS: None known

SECTION 6: ACCIDENTAL RELEASE MEASURES

RELEASE TO LAND: Product is live microorganisms in vegetative form, is considered biodegradable and intended as a soil amendment. Wash spilled product onto soil.

RELEASE TO WATER: Product is live microorganisms in vegetative form and is considered biodegradable.

SECTION 7: HANDLING AND STORAGE

STORAGE TEMPERATURE: Ambient **STORAGE PRESSURE:** Ambient

GENERAL: Store in a cool, dry, well-ventilated, area away from incompatible materials and products. Protect eyes, skin and clothing from contact with product. Wear recommended personal protective equipment when handling this product. Avoid breathing vapors or mists. Use with adequate ventilation. Do not take internally. Keep the container tightly closed when not in use. Wash thoroughly after handling this product.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

CONTROL MEASURES: Use a local or general, mechanical exhaust ventilation system capable of maintaining emissions, in the work area, above the ACGIH-TLV, AIHA WEEL or levels that may cause irritation.

RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT

RESPIRATOR: Respiratory protection is not normally required. If use creates mists or aerosols, or if an ACGIH-TLV is exceeded, a NIOSH approved full facepiece or half mask air-purifying cartridge respirator equipped with an organic vapor cartridge and a dust / mist pre-filter or supplied air may be required. **Note:** Always consult the respirator manufacturer's data when determining the suitability of respiratory protective devices prior to use.

EYES: Safety glasses or goggle are not necessary when handling this product but if utilized wear chemical goggles/safety glasses recommended by ANSI Z87.1-1979. **Note:** Always consult the protective eyewear manufacturer's data when determining the suitability of protective eyewear prior to use.

GLOVES: Gloves are not necessary when handling this product but if gloves are utilized wear Neoprene or Nitrile gloves. **Note:** Always consult the glove manufacturer's permeation data when determining the suitability of gloves prior to use.

CLOTHING & EQUIPMENT: Protective clothing is not necessary when handling this product but if utilized wear a Neoprene apron. An eye wash station and safety shower should be available in the work area. **Note:** Always consult the clothing/equipment manufacturer's permeation data when determining the suitability of clothing/equipment prior to use.

FOOTWEAR: Protective footwear is not necessary when handling this product. **Note:** Always consult the footwear manufacturer's permeation data when determining the suitability of footwear prior to use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Tan liquid	Bulk Density (pounds/ft³):	Not applicable
Physical State:	Liquid	Vapor Pressure:	No data available
Odor:	Slight, organic	Vapor Density (air=1):	No data available
Odor Threshold:	No data available	Evaporation Rate (n-Butyl Acetate=1):	Less than 1
Molecular Formula:	Mixture	VOC Content:	Nil
Molecular Weight:	Not applicable	% Volatile:	Approximately 32
Boiling Point:	Greater than 100° C. (212° F.)	Solubility in H₂O:	Soluble
Freezing/Melting Point:	Less than 0° C. (32° F.)	Octanol/Water Partition Coefficient:	No data available
Specific Gravity:	Approximately 1.0 @ 20° C.	pH (as is):	3.0 - 4.0
Density (pounds/gallon):	Approximately 10.7	pH (1% solution):	No data available

SECTION 10: STABILITY AND REACTIVITY

GENERAL: This product is stable and hazardous polymerization will not occur.

CONDITIONS TO AVOID: Do not store this product below 50° F (10° C) or above 90° F (30° C)

INCOMPATIBLE MATERIAL: Oxidizers, reducing agents, caustics, strong alkaline materials and antimicrobial chemicals.

HAZARDOUS DECOMPOSITION PRODUCTS: None known

SENSITIVITY TO MECHANICAL IMPACT: This product is not sensitive to mechanical impact.

SENSITIVITY TO STATIC DISCHARGE: This product is not sensitive to static discharge.

SECTION 11: TOXICOLOGICAL INFORMATION (additional toxicological information in section 16)

Components:	<u>Proprietary Bacterial Blend</u>
Eye Contact:	No data available
Skin Contact:	No data available
Oral Rat LD₅₀:	No data available
Dermal Rabbit LD₅₀:	No data available
Inhalation Rat LC₅₀:	No data available
Human Data:	No data available
Other Toxicological Data:	No data available
Carcinogenicity:	No data available; This product does not contain any known or anticipated carcinogens according to criteria of the NFP Annual Report on carcinogens and OSHA 29 CFR § 1920, Z
Teratogenicity:	No data available
Mutagenicity:	No data available
Synergistic Products:	None reported
Target Organs:	Eyes, Skin, Mucous membranes
Medical Conditions Aggravated By Exposure:	Skin disorders

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE:

This product is completely soluble in water and is not expected to affect the pH of water. No specific environmental fate data is available, but the organic portion of this product is expected to be biodegradable.

ENVIRONMENTAL CONSIDERATIONS:

The aquatic toxicity for this product has not been determined.

SECTION 13: DISPOSAL CONSIDERATIONS

RCRA 40 CFR 261 CLASSIFICATION: Non-RCRA Hazardous Waste (United States)

U.S. EPA WASTE NUMBER/DESCRIPTION: Not applicable

If this product is disposed of as shipped, it does not meet the criteria of a hazardous waste as defined under 40 CFR 261, in that it does not exhibit the characteristics of a hazardous waste of Subpart C, nor is it listed as a hazardous waste under Subpart D due to toxicity. As a non-hazardous liquid waste, it should be disposed of in accordance with all local, state, and federal regulations. Consult state or local officials for proper disposal method.

SECTION 14: TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: NOT DOT REGULATED (UNITED STATES)
Hazard Class: Not applicable **UN Number:** Not applicable **Packing Group:** Not applicable
Primary Label: None Required **Subsidiary Label(s):** None Required
Primary/Subsidiary Placards: None Required

DOT Reportable Quantity (RQ): Not listed **RQ for Product:** Not applicable
Marine Pollutant: No

2012 North American Emergency Response Guidebook No.: Not applicable

TDG PROPER SHIPPING NAME: NOT RESTRICTED
Hazard Class: Not applicable **UN Number:** Not applicable **Packing Group:** Not applicable
Primary Label: None Required **Subsidiary Label(s):** None Required
Primary/Subsidiary Placards: None Required

TDG Reportable Quantity (RQ): # Not applicable
TDG Schedule XII: Not listed
Regulated Limit (RL): ## Not listed **RL for Product:** Not applicable
Other Shipping Information: None

Canadian Transportation of Dangerous Goods Regulations (TDGR), Part IX, Table I, Quantities or levels for Immediate Reporting: releases of reportable quantities, RQ, that meet the definition of a "dangerous occurrence" (a threat to life, health, property, or the environment) must be reported to the appropriate authorities as outlined in TDGR 9.13(1) and 9.14(1). ## Reporting to Environment Canada is required for any releases exceeding the regulated limits, RL, of 9.2 materials (primary or secondary). The regulated limits are found in Schedule XIII of the TDGR.

SECTION 15: REGULATORY INFORMATION

COMPONENTS: Proprietary Bacterial Blend

OSHA Target Organs: Not determined

Carcinogenic Potential:

Regulated by OSHA: No
Listed on NTP Report: No
Listed by IARC: No
IARC Group: Not applicable
ACGIH Appendix A: Not listed
A1 Confirmed Human: Not applicable
A2 Suspected Human: Not applicable

U.S. EPA Requirements

Release Reporting

CERCLA (40 CFR 302)

Listed Substance: Not listed
Reportable Quantity: Not applicable
Category: Not applicable
RCRA Waste No.: Not applicable

Unlisted Substance: Not applicable
Reportable Quantity: Not applicable
Characteristic: Not applicable
RCRA Waste No.: Not applicable

SARA TITLE III

Section 302 & 303 (40 CFR 355):

Listed Substance: Not listed
Reportable Quantity: Not applicable
Planning Threshold: Not applicable

Section 311 & 312 (40 CFR 370):

Hazard Categories (product): **Fire:** N **Sudden Release of Pressure:** N **Reactive:** N **Acute Health:** Y **Chronic Health:** N
Planning threshold: 10,000 pounds

Section 313 (40 CFR 372):

Listed Toxic Chemical: Not listed
Reporting Threshold: Not applicable

SECTION 15: REGULATORY INFORMATION (Continued)

U.S. TSCA Status

Listed (40 CFR 710): No

State Regulations

State of California: Safe Drinking Water and Toxins Enforcement Act, 1986 (Proposition 65):

Carcinogen: No

Reproductive Toxin: No

Other Regulations

State Right To Know Laws: None

Canadian Regulations

Product Information:

Controlled Product: **No**

WHMIS Hazard Symbols: **NA**

WHMIS Class & Division: **NA**

Ingredient Information:

IDL Substance: No

DSL or NDSL Lists: DSL

SECTION 16: OTHER INFORMATION

EPA Registration number: Not applicable

Approved Product Uses: To balance microbial ecosystems for bioremediation of water and soil for increased bio-oxidation.

Special Notes:

This product is not manufactured, or formulated to contain substances, which the State of California has found to cause cancer and/or birth defects or other reproductive harm.

Special Instructions:

Store Micro Plex-HC® in a cool, dry, well ventilated, area away from incompatible materials and products. When making dilutions, always add this product to water, or aqueous solutions, with adequate mixing to ensure a uniform solution. Do not add strong alkali, caustics or antimicrobial chemicals to this product.

SDS Revision Information: Revised Date: NA

SDS Distributed by: Bio Huma Netics

Prepared By: Frank S. Pidgeon, Sr. EHSS Director

Date Prepared: January 10, 2014

This Material Safety Data Sheet is provided as an information resource only. It should not be taken as a warranty or representation for which Bio Huma Netics assumes legal liability. While Bio Huma Netics believes the information contained herein is accurate and compiled from sources believed to be reliable, it is the responsibility of the user to investigate and verify its validity. The buyer assumes all responsibility of using and handling the product in accordance with applicable federal, state, and local regulations.