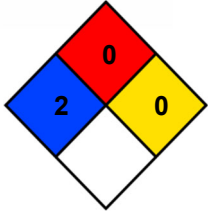




SAFETY DATA SHEET

Probiotic Solutions® Encapsalt®



HMIS	
HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0
PPE	B

SECTION 1: CHEMICAL PRODUCT & COMPANY IDENTIFICATION

PRODUCT IDENTIFIER: Probiotic Solutions® Encapsalt®	Product# 425
GENERAL USE: Used to sequester salts.	
PRODUCT DESCRIPTION: A hazy light brown liquid having a slight characteristic odor.	
SUPPLIER INFORMATION: Bio Huma Netics, Inc. 1331 W Houston Avenue Gilbert, AZ 85233	EMERGENCY PHONE NUMBERS
For Additional SDS call: PHONE: (480) 961-1220	CHEMTREC: (In the USA) 800-424-9300 (International) 703-527-3887

SECTION 2: HAZARDS IDENTIFICATION

HAZARDS OVERVIEW:



A hazy, light brown liquid having a slight characteristic odor. The liquid and mists can be irritating to the eyes and possibly the skin. Inhalation of mists may be irritating to the entire respiratory tract. Ingestion of this product may cause gastrointestinal irritation, with cardiovascular and central nervous system effects.

CLASSIFICATION: HAZARD CATEGORY 4

SIGNAL WORD: WARNING

HAZARD STATEMENT: H302; Harmful if Swallowed

PRECAUTIONARY STATEMENT: P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell, P330; Rinse Mouth P264; Wash hands thoroughly after handling, P270; Do not eat, drink or smoke when using this product.

SECTION 3: COMPOSITION & INFORMATION ON INGREDIENTS

COMPONENT	CAS #	OSHA HAZARD	WT %	ACGIH		OSHA	
				TLV _(TWA)	STEL	PEL _(TWA)	STEL
Urea	57-13-6	Eye Irritant; Slight to Moderate Skin & Respiratory Irritant; Slightly Toxic by Chronic Dermal Contact & Inhalation, with Cardiovascular & Central Nervous System effects.	8 ± 2	None	None	None	None
Ammonium Nitrate	6484-52-2	Oxidizer; Eye, Skin & Respiratory Irritant; Blood toxin	2.5± 1	None	None	None	None
Ammonium Sulfate	7783-20-2	Eye, Skin & Respiratory Irritant; Human Central Nervous System Effects by Ingestion	2.0 ± 1	None	None	None	None
Phosphoric Acid	7664-38-2	Corrosive; Lung Toxin	1 ± 0.5	1 mg/m ³	3 mg/m ³	1 mg/m ³	None
Cobalt Chloride	7646-79-9	Eye, Skin & Respiratory Irritant; Toxic by Ingestion; Possible Human Carcinogen - IARC	0.05 ± .5	0.02 mg/m ³ (as Co) (A3)	None	None	None

NDA = No Data Available

N/A = Not Applicable

SECTION 4: FIRST AID MEASURES

INHALATION:	If inhaled, immediately move to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician.
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 large quantities of this product are swallowed, call a physician immediately. DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
NOTE TO PHYSICIANS:	Based on component information, this product may be slightly to moderately 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: Not applicable	Upper: Not applicable	
Autoignition Temperature:	Not applicable		
GENERAL HAZARD:	This product is an aqueous solution of organic and inorganic compounds. It may produce hazardous decomposition products.		
FIRE FIGHTING INSTRUCTIONS:	EXTINGUISHING MEDIA: Water, foam, CO ₂ or dry chemicals. Use a water spray or fog 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:	When heated to dryness and decomposition, it emits toxic Ammonia gas, with toxic carbon monoxide, carbon dioxide, phosphorus oxides, nitrogen oxides, sulfur oxides and potassium oxide with trace or ultra-trace toxic oxide amounts, of iron, manganese, magnesium, calcium, zinc and sodium.		

SECTION 6: ACCIDENTAL RELEASE MEASURES

RELEASE TO LAND:	Wearing recommended protective equipment and clothing, dike the spill and pick up the bulk of liquid using pumps or a vacuum truck, or absorb the liquid in sand or a commercial absorbent. Place in approved containers for recovery, disposal, or satellite accumulation. Neutralize the alkalinity, of the remaining liquid, using a dilute acid solution appropriate for neutralizing alkaline liquids. Liberally cover the spill area with sodium bicarbonate. Flush the spill area with water; collect the rinsates for disposal or sewer, as appropriate.
RELEASE TO WATER:	Wear recommended protective equipment and clothing if contact with hazardous material can occur. Stop or divert water flow. Dike contaminated water and remove for disposal and/or treatment. As appropriate, notify all downstream users of possible contamination.

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. Do not store in direct sunlight. Protect the eyes, skin and clothing from contact with this product. Wear the recommended protective equipment. Avoid breathing the vapors or mists. Use with adequate ventilation. Do not take internally. 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, below an ACGIH-TLV, OSHA-PEL or those levels that may cause irritation.

RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT

RESPIRATOR: Respiratory protection is not normally required. If use produces mists or aerosols that may cause irritation, a NIOSH approved half mask or full facepiece respirator equipped with a good mist / particulate cartridge or supplied air is recommended. **Note:** Always consult the respirator manufacturer's data when determining the suitability of respiratory protective devices prior to use.

EYES: Wear chemical goggles (recommended by ANSI Z87.1-1979), unless a full face shield is worn. **Note:** Always consult the protective eyewear manufacturer's data when determining the suitability of protective eyewear prior to use.

GLOVES: Wear Neoprene, Nitrile, Butyl Rubber or Natural Rubber gloves. **Note:** Always consult the glove manufacturer's permeation data when determining the suitability of gloves prior to use.

CLOTHING & EQUIPMENT: Wear a Neoprene, Nitrile, Butyl Rubber or Natural Rubber apron, or full protective clothing when handling this product. 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: Wear Neoprene, Nitrile, Butyl Rubber or Natural Rubber boots. **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:	A hazy light brown	Bulk Density (pounds/ft³):	Not applicable
Physical State:	Liquid	Vapor Pressure:	No data available
Odor:	Slight, characteristic	Vapor Density (air=1):	No data available
Odor Threshold:	Not applicable	Evaporation Rate (n-Butyl Acetate=1):	Less than 1
Molecular Formula:	Mixture	VOC Content / Organic Matter:	Nil / 9.0%
Molecular Weight:	Not applicable	% Volatile:	Approximately 77
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:	1.00 – 1.15 @ 20° C.	pH (as is):	6.0 – 7.0
Density (pounds/gallon):	Approximately 8.76	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: Store in a cool dry place, do not store in direct sunlight. Keep from freezing.

INCOMPATIBLE MATERIAL: Oxidizers, caustics & strong alkali and all acids.

HAZARDOUS DECOMPOSITION PRODUCTS: When heated to dryness and decomposition, it emits toxic Ammonia gas, with toxic oxides of carbon, phosphorus, nitrogen, sulfur and potassium oxide with trace or ultra-trace toxic oxide amounts, of iron, manganese, magnesium, calcium, zinc and sodium.

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

Components:	<u>Urea</u>	<u>Phosphoric Acid</u>
Eye Contact:	No data available	Rabbit: 119 mg; Severe
Skin Contact:	No data available	Rabbit: 595 mg/24 hours; Severe
Oral Rat LD₅₀:	8,471 mg/kg	1,530 mg/kg
Dermal Rabbit LD₅₀:	No data available (Rabbit, Subcutaneous LD _{Lo} : 3 gm/kg)	2,740 mg/kg
Inhalation Rat LC₅₀:	No data available (Rat, Inhalation, Chronic – Multiple Dose, 288 mg/m ³ /17 weeks; Toxic effects: Kidney, Ureter & Bladder – Other changes in urine composition; Blood – Other changes; Nutritional and gross metabolic changes.)	Greater than 850 mg/m ³ /1 hour
Human Data:	Human: 22 mg/3 days; Mild	Unreported Route Man LD _{Lo} : 220 mg/kg
Other Toxicological Data:	Rat, Dermal, Chronic – Multiple Dose, 3,024 mg/kg/4 weeks; Toxic effects: Liver – Changes in Liver weight; Endocrine – Changes in Thymus weight; Death.	Oral Man TD _{Lo} : 1,286 uL/kg
Carcinogenicity:	Oral Rat TD _{Lo} : 821 gm/kg/1 year; Tumorigenic – Neoplastic by RTECS criteria; Blood – Tumors; Blood – Lymphomax including Hodgkin's disease.	No data available
Teratogenicity:	Intraplacental Woman TD _{Lo} : 1,400 mg/kg (female 16 Weeks pregnant); Effects on Fertility - Abortion	No data available
Mutagenicity:	Human DNA Inhibition; lymphocyte: 600 mmol/Liter	No data available
Synergistic Products:	None reported	None reported
Target Organs:	Eyes, Skin, Mucous membranes, Lungs, Cardiovascular & Central Nervous Systems	Eyes, Skin, Mucous membranes, Lungs & Gastrointestinal tract
Medical Conditions Aggravated By Exposure:	Skin, Respiratory or Cardiac disorders	Skin, Respiratory or Gastrointestinal disorders
Components:	<u>Ammonium Sulfate</u>	<u>Cobalt Chloride</u>
Eye Contact:	No data available	No data available
Skin Contact:	No data available	No data available
Oral Rat LD₅₀:	2,840 mg/kg	80 mg/kg
Dermal Rabbit LD₅₀:	No data available	No data available (Subcutaneous Rabbit LD _{Lo} : 200 mg/kg)
Inhalation Rat LC₅₀:	No data available	No data available
Human Data:	Oral Man TD _{Lo} : 1,500 mg/kg (Gastrointestinal effects)	Oral Child TD _{Lo} : 48 mg/kg; Toxic Effects; Behavioral – Anorexia (human); Endocrine – Thyroid (goiter)
Other Toxicological Data:	Intraperitoneal Mouse LD ₅₀ : 610 mg/kg	Dermal Rat LD _{Lo} : 2 gm/kg; Toxic Effects: Nutritional and gross metabolic – Weight loss or decreased weight gain
Carcinogenicity:	No data available	Subcutaneous Rat TD _{Lo} : 400 mg/kg/19 Days – I; Toxic Effects: Tumorigenic – Carcinogenic by RTECS criteria; Tumors at site of application
Teratogenicity:	No data available	Oral Rat TD _{Lo} : 11 mg/kg (female 1-22 Days pregnant); Effects on Fertility – Post-implantation mortality
Mutagenicity:	No data available	Human DNA Inhibition, HeLa cell: 1 mmol/Liter
Synergistic Products:	None reported	None reported
Target Organs:	Eyes, Skin, Mucous membranes, Lungs & Central Nervous System	Eyes, Skin, Mucous membranes & Lungs
Medical Conditions Aggravated By Exposure:	Skin or Respiratory disorders	Skin or Respiratory disorders

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE:

This product is soluble in water and is not expected to affect the pH of water. No specific environmental fate data is available.

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-RCRA 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: N/A **UN Number:** N/A **Packing Group:** N/A
Primary Label: None **Subsidiary Label(s):** None
Primary/Subsidiary Placards: None

DOT Reportable Quantity (RQ): Not Listed **RQ for Product:** 50,000 pounds (5,121 gallons)

Marine Pollutant: No

2012 North American Emergency Response Guidebook No.: Not Applicable

TDG PROPER SHIPPING NAME: Not Restricted
Hazard Class: N/A **UN Number:** N/A **Packing Group:** N/A
Primary Label: None **Subsidiary Label(s):** None
Primary/Subsidiary Placards: None

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:	<u>Urea</u>	<u>Phosphoric Acid</u>	<u>Ammonium Sulfate</u>	<u>Cobalt Chloride</u>
<u>OSHA Target Organs:</u>	Eyes, Skin, Mucous membranes, Lungs, Cardiovascular & Central Nervous Systems	Eyes, Skin, Mucous membranes, Lungs & Gastrointestinal tract	Eyes, Skin, Mucous membranes, Lungs & Central Nervous System	Eyes, Skin, Mucous membranes & Lungs
<u>Carcinogenic Potential:</u>				
Regulated by OSHA:	No	No	No	No
Listed on NTP Report:	No	No	No	No
Listed by IARC:	No	No	No	Yes
IARC Group:	Not applicable	Not applicable	Not applicable	Group 2B
ACGIH Appendix A:	Not listed	Not listed	Not listed	Yes (A3)
A1 Confirmed Human:	Not applicable	Not applicable	Not applicable	Not applicable
A2 Suspected Human:	Not applicable	Not applicable	Not applicable	Not applicable

SECTION 15: REGULATORY INFORMATION (Continued from Page 5)

COMPONENTS:	<u>Urea</u>	<u>Phosphoric Acid</u>	<u>Ammonium Sulfate</u>	<u>Cobalt Chloride</u>
--------------------	-------------	------------------------	-------------------------	------------------------

U.S. EPA Requirements

Release Reporting

CERCLA (40 CFR 302)

Listed Substance:	Not listed	Yes	Not listed	Not listed
Reportable Quantity:	Not applicable	5,000 pounds	Not applicable	Not applicable
Category:	Not applicable	D	Not applicable	Not applicable
RCRA Waste No.:	Not applicable	Not listed	Not applicable	Not applicable
Unlisted Substance:	Not applicable	Not applicable	Not applicable	Not applicable
Reportable Quantity:	Not applicable	Not applicable	Not applicable	Not applicable
Characteristic:	Not applicable	Not applicable	Not applicable	Not applicable
RCRA Waste No.:	Not applicable	Not applicable	Not applicable	Not applicable

SARA TITLE III

Section 302 & 303 (40 CFR 355):

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

Section 311 & 312 (40 CFR 370):

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

Section 313 (40 CFR 372):

Listed Toxic Chemical:	Not listed	No (Delisted in June 2000)	Yes (Aqua Ammonia)	Yes (Cobalt compounds)
Reporting Threshold:	Not applicable	Not applicable	10,000 pounds	10,000 pounds

U.S. TSCA Status

Listed (40 CFR 710):	Yes	Yes	Yes	Yes
-----------------------------	-----	-----	-----	-----

State Regulations

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

Carcinogen:	No	No	No	No
Reproductive Toxin:	No	No	No	No

Other Regulations

State Right To Know Laws:	None known	MA, NJ, PA		
----------------------------------	------------	------------	--	--

Canadian Regulations

Product Information:

Controlled Product:	Yes			
WHMIS Hazard Symbols:	Material Causing Other Toxic Effects			
WHMIS Class & Division:	D.2B			

Ingredient Information:

IDL Substance:	No	Yes	No	Yes
DSL or NDSL Lists:	DSL	DSL	DSL	DSL

SECTION 16: OTHER INFORMATION

EPA Registration number: Not applicable

Approved Product Uses: Used as part of a plant nutrition program.

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. However, as it contains mined minerals, this product may contain trace (parts per million) or ultra-trace (parts per billion) of elements known to the State of California to cause cancer, birth defects or other reproductive harm.

Special instructions:

Store Encapsalt® in a cool, dry, well-ventilated area away from incompatible materials and products.

Do not add this product to strong alkali or caustic materials, as this will liberate toxic, corrosive Ammonia gas.

SDS Revision Information: Revised Date: 9/03/2020

SDS Distributed by: Bio Huma Netics, Inc.

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

Date Prepared:	October 20, 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, Inc. assumes legal liability. While Bio Huma Netics, Inc. 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.