



SAFETY DATA SHEET

HUMA GRO® Vitol

HMIS	
HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0
PPE	B

SECTION 1: CHEMICAL PRODUCT & COMPANY IDENTIFICATION

PRODUCT	HUMA GRO® Vitol	Product# 170
GENERAL USE:	Used as a part of a plant nutrition program.	
PRODUCT DESCRIPTION:	A hazy, greenish brown liquid having a unique 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, greenish brown, acidic liquid having a unique characteristic 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, cardiovascular and central nervous system effects.

CLASSIFICATION: MILD SKIN IRRITATION – HAZARD CATEGORY 3

SIGNAL WORD: WARNING

HAZARD STATEMENT: H316 - WARNING - causes mild skin irritation

PRECAUTIONARY STATEMENT: P332+P313; If skin irritation occurs: Get medical attention/advice.

CLASSIFICATION: HAZARD CATEGORY 5 - MAY BE HARMFUL IF SWALLOWED

SIGNAL WORD: WARNING

HAZARD STATEMENT: H303 - WARNING – may be harmful if swallowed

PRECAUTIONARY STATEMENT: P312; Call a poison center/doctor/physician if you feel unwell

SECTION 3: COMPOSITION & INFORMATION ON INGREDIENTS

COMPONENT	CAS #	OSHA HAZARD	WT %	ACGIH		OSHA	
				TLV _(TWA)	STEL	PEL _(TWA)	STEL
Phosphoric Acid	7664-38-2	Corrosive; Lung Toxin	29 ± 3	1 mg/m ³	3 mg/m ³	1 mg/m ³	None
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.	18 ± 2	None	None	None	None
Ammonium Sulfate	7783-20-2	Eye, Skin & Respiratory Irritant	7 ± 1	None	None	None	None
Potassium Carbonate	584-08-7	Eye, Skin	6 ± 1	2 mg/m ³	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 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: Not applicable	Upper: Not applicable	
Autoignition Temperature:	Not Determined		
GENERAL HAZARD:	This product is an aqueous, acidic solution of organic and inorganic compounds. The Uniform Fire Code health hazard classification for this product is: Irritant . 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, carbon monoxide, carbon dioxide, phosphorus oxides, nitrogen oxides, sulfur oxides and magnesium, calcium, zinc, copper 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 commercially absorbent material. Place in approved containers for recovery, disposal, or satellite accumulation. Neutralize the acidity, of the remaining liquid, using sodium bicarbonate, limestone, or other agent appropriate for neutralizing acidic liquids, that will not release Ammonia gas. 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 get this product in eyes, on skin or on clothing. Wear recommended personnel protective equipment when handling this product. Do not breathe mists, vapors, fumes or aerosols. Use only 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, below the OSHA-PEL, ACGIH-TLV or levels that may cause irritation.

RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT

RESPIRATOR: Respiratory protection is not normally required. If use produces mists 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 facepiece respirator 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: If contact is likely, wear a Neoprene, Nitrile, Butyl Rubber, or Natural Rubber apron 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:	Hazy, light greenish brown	Bulk Density (pounds/ft³):	Not applicable
Physical State:	Liquid	Vapor Pressure:	No data available
Odor:	Unique, characteristic	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 / Organic Matter:	Nil / 6.0%
Molecular Weight:	Not applicable	% Volatile:	Approximately 52
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:	1.25 – 1.40 @ 20° C.	pH (as is):	1.5 - 3.0
Density (pounds/gallon):	Approximately 10.1	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, caustics & strong alkali, cyanides, sulfides, sulfites, chlorine releasers, Aluminum, Magnesium, Zinc and alloys of these metals.

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

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 ₅₀ : 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:	Dermal Human Standard Draize Test: 22 mg/3 days; Mild	Unreported Route Man LD ₅₀ : 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 ₅₀ : 1,286 uL/kg
Carcinogenicity:	Oral Rat TD ₅₀ : 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 ₅₀ : 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>Potassium Carbonate</u>
Eye Contact:	No data available	No data available
Skin Contact:	No data available	No data available
Oral Rat LD₅₀:	2,840 mg/kg	1,870 mg/kg
Dermal Rabbit LD₅₀:	No data available	Greater than 2,000 mg/kg
Inhalation Rat LC₅₀:	No data available	No data available
Human Data:	Oral Man TD ₅₀ : 1,500 mg/kg (Gastrointestinal effects)	No data available
Other Toxicological Data:	Intraperitoneal Mouse LD ₅₀ : 610 mg/kg	No data available
Carcinogenicity:	No data available	This product is not considered to be a carcinogen by IARC, ACGIH, NTP or OSHA
Teratogenicity:	No data available	No data available
Mutagenicity:	No data available	No data available
Synergistic Products:	None reported	None reported
Target Organs:	Eyes, Skin, Mucous membranes, Lungs & Central Nervous System	Eyes, Skin
Medical Conditions Aggravated By Exposure:	Skin or Respiratory disorders	Eye and skin

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE:

This product is soluble in water and can 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

Hazard Class: Not applicable **UN Number:** N/A **Packing Group:** N/A

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:** N/A **Packing Group:** N/A

Primary Label: None Required **Subsidiary Label(s):** None Required

Primary/Subsidiary Placards: None Required

TDG Reportable Quantity (RQ): * Not applicable

TDG Schedule XII: Not applicable

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>Potassium Carbonate</u>
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<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
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Carcinogenic Potential:

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

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

SECTION 15: REGULATORY INFORMATION (Continued from Page 5)

COMPONENTS:	<u>Urea</u>	<u>Phosphoric Acid</u>	<u>Ammonium Sulfate</u>	<u>Potassium Carbonate</u>	
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	10,000 pounds
Section 313 (40 CFR 372):					
Listed Toxic Chemical:	Not listed	No (Delisted in June 2000)	Yes (Aqua Ammonia)	Not Listed	
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, PA, NJ, CA	
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	No	No	No	
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 containing 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 Vitol 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: 11/15/17

SDS Distributed by: Bio Huma Netics, Inc.

Prepared By: Frank S. Pidgeon, Sr. EHS Director	Date Prepared: October 21, 2014
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