



SAFETY DATA SHEET HUMA GRO® Breakout

HMIS	
HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	0
PPE	D

	SECTION 1:	CHEMICAL	PRODUCT &	COMPANY	IDENTIFICATION
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PRODUCT HUMA GRO® Breakout Product# 175
IDENTIFIER:

GENERAL USE: Used as a part of a plant nutrition program.

PRODUCT A clear to slightly hazy, dark brown liquid having a slight characteristic odor.

DESCRIPTION:

ION:

SUPPLIER INFORMATION: Bio Huma Netics, Inc.

1331 W Houston Avenue Gilbert, AZ 85233

For Additional SDS call: PHONE: (480) 961-1220

EMERGENCY PHONE NUMBERS

CHEMTREC: (In the USA) 800-424-9300

(International) 703-527-3887

SECTION 2: HAZARDS IDENTIFICATION

HAZARDS OVERVIEW: A clear to slightly hazy, dark brown, acidic liquid having a slight characteristic odor. The liquid may be severely irritating or corrosive to all tissues contacted. Exposure to this product's mists may cause severe irritation or burns to the eyes, skin and respiratory tract. Ingestion may cause damage to the gastrointestinal tract. **The NIOSH I. D.**

L. H. for Phosphoric Acid is: 1,000 mg/m³



CLASSIFICATION: SKIN CORROSION - CATEGORY 1A

SIGNAL WORD: DANGER

HAZARD STATEMENT: H314; causes severe skin burns and eye damage

PRECAUTIONARY STATEMENT: P260; Do not breathe dusts/mist/vapors. P280; Wear protective

gloves/protective clothing/eye protection/face protection P264; Wash hands thoroughly after handling

SECTION 3: COMPOSITION & INFORMATION ON INGREDIENTS

				ACGIH		OSHA	
COMPONENT	CAS#	OSHA HAZARD	<u>WT %</u>	$TLV_{(TWA)}$	STEL	$PEL_{(TWA)}$	STEL
Phosphoric Acid	7664-38-2	Corrosive; Lung Toxin	18 ± 2	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	11 ± 2	None AIHA WEEL: 10 mg/m³	None	None	None
		Nervous System effects.					
Ammonium Sulfate	7783-20-2	Eye, Ski & Respiratory Irritant	4 ± 1	None	None	None	None
Potassium Carbonate	584-08-7	Eye, Skin	4 ± 1	2 mg/m ³	None	None	None
Hydrogen Peroxide	7722-84-1	Oxidizer; Lung toxin; IARC – Suspected Carcinogen	0.46 ± 0.1	1 ppm (A3)	None	1 ppm	None

SECTION 4: FIRST AID MEASURES

INHALATION: If inhaled, immediately move to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth

method if victim ingested or inhaled the substance; use the Holger Nielsen method (back pressure-arm lift) or proper

respiratory device. 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 immediately.

SKIN CONTACT: In case of contact, immediately flush skin with plenty of clean running water for at least 15 minutes, while removing

contaminated clothing and shoes. If burn or irritation occurs, call a physician.

INGESTION: If swallowed, DO NOT induce vomiting. Get medical attention immediately. If victim is fully conscious, give plenty of

water to drink. Never give anything by mouth to an unconscious person.

NOTE TO PHYSICIANS:

Phosphoric Acid has a low oral toxicity, but it can be severely irritating and/or corrosive to the eyes, skin and mucous membranes. If ingested, consideration should be given to careful endoscopy as stomach or esophageal burns,

perforations or strictures may occur. 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 agueous, acidic solution of organic and inorganic compounds. This product is not combustible.

but it may generate flammable / explosive Hydrogen gas on contact with Aluminum and some other metals. The Uniform Fire Code health hazard classification for this product is: **Corrosive (Acidic).** Dilute solutions of this

product may also be corrosive. It may produce hazardous decomposition products.

FIRE FIGHTING INSTRUCTIONS: EXTINGUISHING MEDIA: Water, foam, CO₂ 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, potassium oxide, zinc oxide and boron oxide with trace or ultra-trace toxic oxide amounts, of, iron, manganese,

magnesium, calcium 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 acidity, of the remaining liquid, using lime, Sodium Bicarbonate, or other agent appropriate for neutralizing acidic liquids, that will not liberate large amounts of Ammonia gas. Flush the spill area with water; collect the rinsates for disposal or sewer, as appropriate. If Ammonia gas is being liberated from a spill, then an inhalation hazard is present. When an inhalation hazard is indicated, respiratory equipment (a full

facepiece respirator with an Ammonia gas cartridge or supplied air) is required during the clean-up of the spill.

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. 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 Use a local or general, mechanical exhaust ventilation system capable of maintaining emissions, in the work area,

MEASURES: above the ACGIH-TLV, OSHA-PEL, AIHA WEEL or levels that may cause irritation.

RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT

RESPIRATOR: For exposure above the ACGIH-TLV, AIHA-WEEL or OSHA-PEL, wear a NIOSH-approved full facepiece or half

mask air-purifying cartridge respirator equipped with a good mist / particulate filter cartridge or supplied air. **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 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. Butvl Rubber or Natural Rubber gloves. Note: Always consult the glove manufacturer's

permeation data when determining the suitability of gloves prior to use.

CLOTHING &Wear a Neoprene, Nitrile, Butyl Rubber or Natural Rubber apron, or full protective clothing when handling this **EQUIPMENT:**product. An eye wash station and safety shower should be available in the work area. **Note:** Always consult the

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:	Clear to slightly hazy, dark 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:	No data available	Evaporation Rate (n-Butyl Acetate=1):	Less than 1		
Molecular Formula:	Mixture	VOC Content / Organic Matter:	Nil / 11.18%		
Molecular Weight:	Not applicable	% Volatile:	Approximately 63		
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:	1.20 – 1.40 @ 20° C.	pH (as is):	1.5 to 2.5		
Density (pounds/gallon):	Approximately 10.77	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: Strong alkali & caustics, reducing agents, oxidizers, 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, potassium, zinc and boron plus trace or ultra-trace toxic oxide amounts, of, iron, manganese, magnesium, calcium and

sodium.

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

SENSITIVITY TO STATIC DISCHARGE: This product is <u>not</u> sensitive to static discharge.

SECTION 11: TOXICOLOGICAL INFORMATION Components: Urea **Phosphoric Acid Eye Contact:** Rabbit: 119 mg; Severe No data available **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 LDLo: 3 gm/kg) 2,740 mg/kg Inhalation Rat LC₅₀: No data available (Rat, Inhalation, Chronic - Multiple Greater than 850 mg/m³/1 hour Dose, 288 mg/m³/17 weeks; Toxic effects: Kidney, Ureter & Bladder - Other changes in urine composition; Blood -Other changes; Nutritional and gross metabolic changes.) **Human Data:** Human: 22 mg/3 days; Mild Unreported Route Man LDLo: 220 mg/kg Other Toxicological Data: Rat, Dermal, Chronic - Multiple Dose, 3,024 mg/kg/4 Oral Man TDLo: 1,286 uL/kg weeks; Toxic effects: Liver - Changes in Liver weight; Endocrine - Changes in Thymus weight; Death. Carcinogenicity: Oral Rat TD_{Lo}: 821 gm/kg/1 year; Tumorigenic – No data available Neoplastic by RTECS criteria; Blood - Tumors; Blood -Lymphomax including Hodgkin's disease. Intraplacental Woman TD_{Lo}: 1,400 mg/kg (female 16 Teratogenicity: No data available Weeks pregnant); Effects on Fertility - Abortion 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 Eyes, Skin, Mucous membranes, Lungs & Gastrointestinal & Central Nervous Systems **Medical Conditions** Skin, Respiratory or Cardiac disorders Skin, Respiratory or Gastrointestinal disorders Aggravated By Exposure: Components: **Ammonium Sulfate** Potassium Carbonate **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_{Lo}: 1,500 mg/kg (Gastrointestinal effects) No data available Other Toxicological Data: Intraperitoneal Mouse LD₅₀: 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 availableNo data availableMutagenicity:No data availableNo data availableSynergistic Products:None reportedNone reportedTarget Organs:Eyes, Skin, Mucous membranes, Lungs & CentralEyes, Skin

Nervous System

Medical Conditions
Aggravated By Exposure:

Skin or Respiratory disorders

Eye and skin

SECTION 11: TOXICOLOGICAL INFORMATION (Continued from Page 4)

Components: <u>Hydrogen Peroxide</u>

Eye Contact: No data available
Skin Contact: No data available

Oral Rat LD₅₀: 1,518 mg/kg (8 – 20% solution)

Dermal Rabbit LD₅₀: No data available
Inhalation Rat LC₅₀: 2 gm/m³/4 hours

 Human Data:
 Oral Man LD_{Lo}: 1,429 mg/kg (30% solution)

 Other Toxicological Data:
 Dermal Rat LD₅₀: 4,060 mg/kg (90% solution)

 Carcinogenicity:
 Oral Mouse TD_{Lo}: 622 gm/kg/2 Years-Continuous;

Tumorigenic – Carcinogenic by RTECS criteria; Gastrointestinal - Tumors (30% solution)

Teratogenicity: No data available

Mutagenicity: Human DNA Damage; lymphocyte: 9 umol/Liter

Synergistic Products: None reported

Target Organs: Eyes, Skin, Mucous membranes, Lungs, Gastrointestinal

tract & Central Nervous System

Medical Conditions

Aggravated By Exposure: Skin, Respiratory or Gastrointestinal disorders

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE:

This product is soluble in water and may significantly affect the pH of water. No specific environmental fate data is available.

ENVIRONMENTAL CONSIDERATIONS:

The aquatic toxicity for this product is related to the pH of the water. For Rainbow trout, the reported LC_{50} is about a pH of 4.0 for a 7 day bioassay. Other species may vary a bit from this pH level, but all are susceptible to acidic pH conditions.

SECTION 13: DISPOSAL CONSIDERATIONS

RCRA 40 CFR 261 CLASSIFICATON: 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: Phosphoric Acid, Solution

Hazard Class: 8 UN Number: UN1805 Packing Group: |||

Primary Label: Corrosive Subsidiary Label(s): None

Primary/Subsidiary Placards: Corrosive

DOT Reportable Quantity (RQ): 5,000 lbs. (H3PO4) RQ for Product: 125,000 lbs. (11,505 gal.)

Marine Pollutant: No

2012 North American Emergency Response Guidebook No.: 154

TDG PROPER SHIPPING NAME: Phosphoric Acid, Liquid

Hazard Class: 8 UN Number: UN1805 Packing Group: |||

Primary Label: Corrosive Subsidiary Label(s): None

Primary/Subsidiary Placards: Corrosive

TDG Reportable Quantity (RQ): * At least 5kg or 5 liters

TDG Schedule XII: Not listed

Regulated Limit (RL): ** 230kg (H3PO4) RL for Product: 5,750kg (4,416 liters)

Other Shipping Information: None

SECTION 15: REGULATORY INFORMATION

COMPONENTS:	<u>Urea</u>	Phosphoric Acid	Ammonium Sulfate	Potassium Carbonate
OSHA Target Organs:	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
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
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
c.ming rinconoid.	applicable	sppnoabio	applicable	

^{*} 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 (Continued from Page 6)

COMPONENTS: <u>Urea</u> <u>Phosphoric Acid</u> <u>Potassium Carbonate</u>

Section 311 & 312 (40 CFR 370):

Planning threshold: 10,000 pounds 10,000 pounds 10,000 pounds

Section 313 (40 CFR 372):

Listed Toxic Chemical: Not listed No (Delisted in June 10,000 pounds

2000)

Reporting Threshold: Not applicable Not applicable Not Listed

U.S. TSCA Status

Listed (40 CFR 710): 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: MA, NJ, PA MA, NJ, CA

Canadian Regulations

Product Information:

Controlled Product: Yes

WHMIS Hazard Symbols: Corrosive Material

WHMIS Class & Division: E

Ingredient Information:

 IDL Substance:
 No
 No
 No

 DSL or NDSL Lists:
 DSL
 DSL
 DSL

COMPONENTS: <u>Hydrogen Peroxide</u>

OSHA Target Organs: Eyes, Skin, Mucous

membranes, Lungs, Gastrointestinal tract & Central Nervous System

Carcinogenic Potential:

Regulated by OSHA:

Listed on NTP Report:

No

Listed by IARC:

IARC Group:

ACGIH Appendix A:

A1 Confirmed Human:

A2 Suspected Human:

Not applicable

Not applicable

U.S. EPA Requirements

Release Reporting

CERCLA (40 CFR 302)

Listed Substance:Not listedReportable Quantity:Not applicableCategory:Not applicableRCRA Waste No.:Not applicable

Unlisted Substance: Yes
Reportable Quantity: 100 pounds
Characteristic: Reactivity
RCRA Waste No.: D001

SECTION 15: REGULATORY INFORMATION (continued from page 7

COMPONENTS: Hydrogen Peroxide

SARA TITLE III

Section 302 & 303 (40 CFR 355):

Listed Substance:Not listedReportable Quantity:Not applicablePlanning Threshold:Not applicable

Section 311 & 312 (40 CFR 370):

Planning threshold: 10,000 pounds

Section 313 (40 CFR 372):

Listed Toxic Chemical: Not listed
Reporting Threshold: Not applicable

U.S. TSCA Status

Listed (40 CFR 710): Yes

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:

Canadian Regulations

Product Information:

Controlled Product: Yes

WHMIS Hazard Symbols: Corrosive Material

WHMIS Class & Division:

Ingredient Information:

IDL Substance: Yes
DSL or NDSL Lists: 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 Breakout 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 a large amount of heat and 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. EHSS Director Date Prepared: October 20, 2014

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