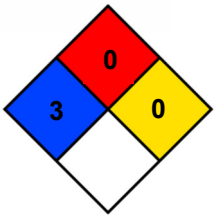
SAFETY DATA SHEET
HUMA GRO® Pur Cal®

Rev D 9/08/2020



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HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	0
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SECTION 1: CHEMICAL PRODUCT & COMPANY IDENTIFICATION

PRODUCT IDENTIFIER:	**HUMA GRO® Pur Cal®**	**Product # 031**
GENERAL USE:	Used as a part of a plant nutrition program and in the production of plant nutrient products.	
PRODUCT DESCRIPTION:	A slightly hazy, light amber liquid having a peppermint type odor.	

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 slightly hazy, light amber, strongly acidic liquid having a peppermint type odor. May be irritating or slightly corrosive to skin. Inhalation of mists may cause irritation to the respiratory tract. Ingesting this product can be harmful or possibly fatal even if swallowed in a relatively small amount.

CLASSIFICATION: HAZARD CATEGORY 3 - MILD SKIN IRRITATION
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

				ACGIH		OSHA	
COMPONENT	**CAS #**	**OSHA HAZARD**	**WT %**	**$TLV_{(TWA)}$**	**STEL**	**$PEL_{(TWA)}$**	**STEL**
Calcium Chloride	10043-52-4	Oxidizer; Eye, Skin & Respiratory Irritant; Toxic by Ingestion	22.0 ± 2%	None	None	None	None
Calcium Acetate	7697-37-2	Corrosive; Eye, Skin & Respiratory Hazard; Lung toxin; Toxic by Ingestion	4 ± 0.5%	2 ppm	4 ppm	2 ppm	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. 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, unless directed to do so by medical personnel. 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: This product may be corrosive to all tissues contacted. If inhaled, delayed pulmonary edema may occur. 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. (Avoid using carbonate / bicarbonate lavage solutions as they may liberate a large volume of Carbon Dioxide gas and that could possibly damage or rupture internal organs from the pressure.) 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, 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:** Flood with water.
Use 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 Nitric Acid vapors, nitrogen oxides and calcium oxide, with trace or ultra-trace toxic oxide amounts, of phosphorus, potassium, sulfur, iron, zinc, manganese, magnesium, sodium and carbon.

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 soda ash, lime, or other agent appropriate for neutralizing acidic liquids. 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. Avoid storing this product in direct sunlight. Do not allow this product to contact eyes, skin or clothing. Wear recommended personnel protective equipment when handling this product. Do not breathe vapors, mists or aerosols. Use only with adequate ventilation. Do not ingest (drink) this product. 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: 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 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: 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:	Slightly hazy, light amber	**Bulk Density (pounds/ft^3):**	Not applicable
Physical State:	Liquid	**Vapor Pressure:**	No data available
Odor:	Slight, acidic type	**Vapor Density (air=1):**	No data available
Odor Threshold:	No data available	**Evaporation Rate (n-Butyl Acetate=1):**	No data available
Molecular Formula:	Mixture	**VOC Content / Organic Matter:**	NA / 3.0%
Molecular Weight:	Not applicable	**% Volatile:**	No data available
Boiling Point:	Greater than 100° C. (212° F.)	**Solubility in H_2O:**	Complete
Freezing/Melting Point:	Less than 0° C. (32° F.)	**Octanol/Water Partition Coefficient:**	No data available
Specific Gravity:	1.39 – 1.49 @ 20° C.	**pH (as is):**	1.5 – 2.5
Density (pounds/gallon):	Approximately 10.85	**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: Caustics and alkali, all reducing agents, oxidizable inorganic compounds, turpentine, organic chemicals, carbides, sulfides, sulfites, cyanides, chlorine releasers, most metals (especially Aluminum, Magnesium, Zinc, etc.) and combustible materials.

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

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:	**Calcium Chloride**	**Calcium Acetate**
Eye Contact:	No data available	No data available
Skin Contact:	No data available	No data available
Oral Rat LD_{50}:	302 mg/kg	No data available
Dermal Rabbit LD_{50}:	No data available	No data available
Inhalation Rat LC_{50}:	No data available	No data available
Human Data:	No data available	Oral Human LD_{Lo}: 430 mg/kg
Other Toxicological Data:	No data available	Unreported Route Man LD_{Lo}: 110 mg/kg
Carcinogenicity:	No data available	No data available
Teratogenicity:	No data available	Oral Rat TD_{Lo}: 21,150 mg/kg; Duration: (female 1-21 Days Pregnant) Effects on Embryo or Fetus - Fetotoxicity
Mutagenicity:	No data available	No data available
Synergistic Products:	None reported	None reported
Target Organs:	Eyes, Skin, Lungs, & Gastrointestinal tract	Eyes, Skin, Mucous membranes, Lungs, Gastrointestinal tract & Teeth
Medical Conditions Aggravated By Exposure:	Skin, Respiratory or Gastrointestinal disorders	Skin, Respiratory or Gastrointestinal disorders

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE:

This product is completely soluble in water and may significantly affect the pH of water. No specific environmental fate data is available. Inorganic products do not meet the definition of biodegradability.

ENVIRONMENTAL CONSIDERATIONS:

The aquatic toxicity of 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. Some species may vary from this pH level but all are susceptible to acidic 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: **Corrosive Liquid, n.o.s. (contains acetic acid)**

Hazard Class: 8 **UN Number:** UN1760 **Packing Group:** II

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

Primary/Subsidiary Placards: Corrosive

DOT Reportable Quantity (RQ): Not Listed **RQ for Product:** NA

Marine Pollutant: No

2012 North American Emergency Response Guidebook No.: **154**

TDG PROPER SHIPPING NAME: **Corrosive Liquid, n.o.s. (contains acetic acid)**

Hazard Class: 8 **UN Number:** UN1760 **Packing Group:** II

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

Primary/Subsidiary Placards: Corrosive

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

TDG Schedule XII: Not listed

Regulated Limit (RL): ** Not applicable **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:	**Calcium Chloride**	**Calcium Acetate**
OSHA Target Organs:	Eyes, Skin, Lungs, & Gastrointestinal tract	Eyes, Skin, Mucous membranes, Lungs, Gastrointestinal tract & Teeth
Carcinogenic Potential:		
Regulated by OSHA:	No	No
Listed on NTP Report:	No	No
Listed by IARC:	No	No
IARC Group:	Not applicable	Not applicable
ACGIH Appendix A:	Not listed	Not listed
A1 Confirmed Human:	Not applicable	Not applicable
A2 Suspected Human:	Not applicable	Not applicable

U.S. EPA Requirements

Release Reporting

CERCLA (40 CFR 302)

Listed Substance:	Not listed	Yes
Reportable Quantity:	Not applicable	1,000 pounds
Category:	Not applicable	C
RCRA Waste No.:	Not applicable	None listed
Unlisted Substance:	Yes	Not applicable
Reportable Quantity:	100 pounds	Not applicable
Characteristic:	Ignitability	Not applicable
RCRA Waste No.:	D001	Not applicable

SARA TITLE III

Section 302 & 303 (40 CFR 355):

Listed Substance:	Not listed	Yes
Reportable Quantity:	Not applicable	1,000 pounds
Planning Threshold:	Not applicable	1,000 pounds

SECTION 15: REGULATORY INFORMATION (continued from page 4)

COMPONENTS:	**Calcium Chloride**	**Calcium Acetate**
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	10,000 pounds
Section 313 (40 CFR 372):		
Listed Toxic Chemical:	Not listed	Not listed
Reporting Threshold:	NA	NA

U.S. TSCA Status

Listed (40 CFR 710):	Yes	Yes

State Regulations

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

Carcinogen:	No	No
Reproductive Toxin:	No	No

Other Regulations

State Right To Know Laws: MA, NJ, PA, CA

Canadian Regulations

Product Information:

Controlled Product:	**Yes**
WHMIS Hazard Symbols:	**Oxidizing Material; Corrosive Material**
WHMIS Class & Division:	**C; E**

Ingredient Information:

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

SECTION 16: OTHER INFORMATION

EPA Registration number: Not applicable

Approved Product Uses: Used as a 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.

Special instructions:

Store Pur Cal™ in a cool, dry, well-ventilated area, out of direct sunlight and away from incompatible materials or products. Do not add this product to hypochlorite bleaches, chlorine sanitizers or chlorinated cleaners as this liberates toxic, corrosive Chlorine gas.

SDS Revision Information: Revised Date: 9/08/2020

SDS Distributed by: Bio Huma Netics, Inc.

Prepared By:	Frank S. Pidgeon, Sr. EHSS Director	**Date Prepared:**	May 20th 2016