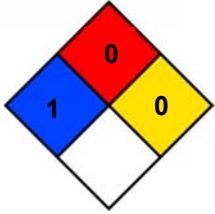




SAFETY DATA SHEET HUMA GRO Cobalt

Rev F 11-15-17



HMIS	
HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PPE	A

SECTION 1: CHEMICAL PRODUCT & COMPANY IDENTIFICATION

PRODUCT IDENTIFIER:	HUMA GRO Cobalt	Product #320
GENERAL USE:	Used as a part of a plant nutrition program and in the production of plant nutrient products.	
PRODUCT DESCRIPTION:	A clear, deep reddish purple liquid having no 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 clear, deep reddish purple, acidic liquid having no characteristic odor. The liquid and mists can cause eye irritation and may cause skin or respiratory tract irritation. This solution is toxic by ingestion.



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.

CLASSIFICATION: 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.

SECTION 3: COMPOSITION & INFORMATION ON INGREDIENTS

COMPONENT	CAS #	OSHA HAZARD	WT %	ACGIH		OSHA	
				TLV _(TWA)	STEL	PEL _(TWA)	STEL
Cobalt Chloride	7646-79-9	Eye, Skin & Respiratory Irritant; Toxic by Ingestion; Possible Human Carcinogen - IARC	12 ± 1	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. 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.
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. Get medical attention if symptoms occur.
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:	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 a non-combustible, acidic, aqueous solution of an inorganic Cobalt salt. The Uniform Fire Code health hazard classification for this product is: **Irritant**. This product may produce hazardous decomposition products.

FIRE FIGHTING INSTRUCTIONS: **EXTINGUISHING MEDIA:** Water, foam, CO₂ or dry chemicals.
Use the extinguishing media that is appropriate for the surrounding fire. 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 chloride fumes and cobalt oxides, with trace or ultra-trace toxic oxide amounts, of phosphorus, potassium, nitrogen, sulfur, iron, magnesium, zinc, manganese, 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 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. Protect eyes, skin and clothing from contact with this product. Wear recommended personnel protective equipment. Avoid breathing mists or aerosols. Use with adequate ventilation. Keep containers tightly closed when not in use. Wash thoroughly after handling.

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 ACGIH-TLV or levels that may cause irritation.

RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT

RESPIRATOR: If use of this product creates mists or aerosols that exceed the ACGIH-TLV or which may cause irritation, wear a NIOSH approved full facepiece or half mask air-purifying cartridge respirator equipped with a good mist / particulate 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 Butyl Rubber, Neoprene 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 Butyl Rubber, Neoprene 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 Butyl Rubber, Neoprene or Natural Rubber boots, if contact is likely. **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, deep reddish purple	Bulk Density (pounds/ft³):	Not applicable
Physical State:	Liquid	Vapor Pressure:	No data available
Odor:	No 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 / 0.43%
Molecular Weight:	Not applicable	% Volatile:	Approximately 87
Boiling Point:	Greater than 100° C. (212° F.)	Solubility in H₂O:	Complete
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):	2.0 to 3.5
Density (pounds/gallon):	Approximately 8.4	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 & 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 chloride fumes and toxic oxides of cobalt, with trace or ultra-trace toxic oxide amounts, of phosphorus, potassium, nitrogen, sulfur, iron, magnesium, zinc, manganese, calcium 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>Cobalt Chloride</u>
Eye Contact:	No data available
Skin Contact:	No data available
Oral Rat LD₅₀:	80 mg/kg
Dermal Rabbit LD₅₀:	No data available (Subcutaneous Rabbit LD ₅₀ : 200 mg/kg)
Inhalation Rat LC₅₀:	No data available
Human Data:	Oral Child TD _{Lo} : 48 mg/kg; Toxic Effects; Behavioral – Anorexia (human); Endocrine – Thyroid (goiter)
Other Toxicological Data:	Dermal Rat LD _{Lo} : 2 gm/kg; Toxic Effects: Nutritional and gross metabolic – Weight loss or decreased weight gain
Carcinogenicity:	Subcutaneous Rat TD _{Lo} : 400 mg/kg/19 Days – I; Toxic Effects: Tumorigenic – Carcinogenic by RTECS criteria; Tumors at site of application
Teratogenicity:	Oral Rat TD _{Lo} : 11 mg/kg (female 1-22 Days pregnant); Effects on Fertility – Post-implantation mortality
Mutagenicity:	Human DNA Inhibition, HeLa cell: 1 mmol/Liter
Synergistic Products:	None reported
Target Organs:	Eyes, Skin, Mucous membranes & Lungs
Medical Conditions Aggravated By Exposure:	Skin or Respiratory disorders

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE:

This product is heavier than water and completely soluble in water. This product 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. However, the aquatic toxicity for Cobalt Chloride is: 1,000 ppm/30-32hours/goldfish/killed/fresh (hard) water; 10 ppm/168 hours/goldfish/killed/fresh (soft) water.

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 meets the criteria of a hazardous waste as defined under 40 CFR 261 due to its corrosivity. If this product becomes a waste, it will be a hazardous waste which is subject to the Land Disposal Restrictions under 40 CFR 268 and must be managed accordingly. As a hazardous liquid waste, it must be disposed of in accordance with local, state, and federal regulations in a permitted hazardous waste treatment, storage, and disposal facility.

SECTION 14: TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Not DOT Regulated (United States)
Hazard Class: Not Applicable **UN Number:** Not Applicable **Packing Group:** None
Primary Label: None **Subsidiary Label(s):** None
Primary/Subsidiary Placards: None

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 **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: Cobalt Chloride
OSHA Target Organs: Eyes, Skin, Mucous membranes & Lungs

Carcinogenic Potential:

Regulated by OSHA: No
Listed on NTP Report: No
Listed by IARC: Yes
IARC Group: Group 2B
ACGIH Appendix A: Yes (A3)
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

SECTION 15: REGULATORY INFORMATION (continued from page 4)

SARA TITLE III

COMPONENTS: Calcium Nitrate

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:** Y
Planning threshold: 10,000 pounds

Section 313 (40 CFR 372):

Listed Toxic Chemical: Yes (Cobalt Compounds)
Reporting Threshold: 10,000 pounds

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: NJ

Canadian Regulations

Product Information:

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

Ingredient Information:

IDL Substance: Yes
DSL or NDSL Lists: 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. 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:

When making dilutions, always add Cobalt (320) to water, or aqueous solutions, with adequate mixing to ensure a uniform solution. Do not add this product to hypochlorite bleaches, chlorine sanitizers, or chlorinated cleaners as this can liberate toxic, corrosive Chlorine gas.

SDS Revision Information: **Revision 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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