



Safety Data Sheet

Micro - Professional 3-Part Nutrient Series

SECTION 1. IDENTIFICATION

Product Identifier	Micro
Other Means of Identification	Nitrates and inorganic minerals in aqueous solution.
Recommended Use	Hydroponic plant nutrients.
Restrictions on Use	<i>Not Applicable</i>
Initial Supplier Identifier	Emerald Harvest 1399 Corporate Center Parkway Santa Rosa, California 95407 USA Telephone: +1 866-325-8235
Emergency Telephone Number	CHEMTREC, U.S.: 1-800-424-9300 International: +1-703-527-3887 (Collect Calls Accepted)

SECTION 2. HAZARD IDENTIFICATION

GHS Classification	OXIDIZING SOLID - CATEGORY 3 SERIOUS EYE DAMAGE/IRRITATION - CATEGORY 2A SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - CATEGORY 3
Label Elements Pictograms	
Signal Word	WARNING
Hazard Statements	H272 – May intensify fire; oxidizer. H319 – Causes serious eye irritation. H335 – May cause respiratory irritation.
Precautionary Statements	
Prevention:	P210 – Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P220 – Keep away from clothing and other combustible materials. P261 – Avoid breathing fume/gas/mist/vapours/spray. P264 – Wash hands thoroughly after handling. P271 – Use only outdoors or in a well-ventilated area. P280 – Wear protective gloves/eye protection/face protection.
Response:	P304 + P340 – IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 – Call a POISON CENTER/Doctor if you feel unwell. P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 – If eye irritation persists: Get medical advice/attention.
Storage:	P403 + P233 – Store in a well-ventilated place. Keep container tightly closed. P405 – Store locked up.

Disposal:	P501 – Dispose of contents/container to an approved waste disposal plant.
Other Hazards	Product contains less than 0.1% of a chemical known to cause cancer.
NOTES	SDS is to be retained and available for use by employees and other users of the product.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration	Common name / Synonyms
Calcium Nitrate	13477-34-4	0.5 - 5%	<i>Not Available</i>
Ammonium Nitrate	6484-52-2	0.5 - 5%	<i>Not Available</i>
Potassium Nitrate	7757-79-1	0.5 - 5%	<i>Not Available</i>
Urea	57-13-6	0.5 - 1%	<i>Not Available</i>
Cobalt Nitrate	10026-22-9	<1%	<i>Not Available</i>
Iron EDTA	15708-41-5	<1%	<i>Not Available</i>
Sodium Borate	1303-96-4	<1%	<i>Not Available</i>
Sodium Molybdate	10102-40-6	<1%	<i>Not Available</i>
Copper EDTA	39208-15-6	<1%	<i>Not Available</i>
Manganese EDTA	15375-84-5	<1%	<i>Not Available</i>
Zinc EDTA	14025-21-9	<1%	<i>Not Available</i>
Non-hazardous ingredients or those below disclosure requirements	<i>Not applicable</i>	To Balance	<i>Not Available</i>

Notes	
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SECTION 4. FIRST-AID MEASURES

Inhalation	If breathed in, move person into fresh air. If concerned or symptoms persist, seek medical attention.
Skin Contact	Rinse with plenty of water for at least 20 minutes. If concerned, seek medical attention.
Eye Contact	Rinse with plenty of water for at least 20 minutes. Remove contact lenses if easily possible. If irritation persists, get medical attention.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. If large amounts are ingested, get medical attention immediately.
Most Important Symptoms and Effects, Acute and Delayed	Acute: EYE CONTACT: May cause irritation, itching, pain, redness, watering. Chronic: <i>Not Applicable</i>
Immediate Medical Attention and Special Treatment	Treat symptomatically. In case of inhalation of decomposition products in a fire involving this product, symptoms may be delayed. Keep under medical surveillance for 48 hours.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media	
Suitable Extinguishing Media	Use extinguishing agent suitable for surrounding fire.
Unsuitable Extinguishing Media	<i>None known.</i>
Flammability classification (OSHA 29 CFR 1910.106)	Product increases the risk of fire and may aid combustion.
Hazardous Combustion Products	Oxides of nitrogen, sodium, molybdenum and other unidentified toxic fumes.

Specific Hazards Arising from the Product	If in a fire or containers are heated, pressure increases will occur and containers may rupture. Product may release toxic fumes.
Special Protective Equipment and Precautions for Fire-Fighters	Isolate scene of the fire. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece. Move fire exposed containers from fire area if safe to do so. Use water spray to cool fire-exposed containers to prevent rupture.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures	Implement spill control plan. All persons dealing with the clean-up should be trained and wear the appropriate personal protective equipment. Do not touch spilled product. Ensure adequate ventilation. Remove all sources of ignition. Avoid breathing vapours or mists. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.
Methods for Containment and Cleaning Up	Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply. Ventilate area of release. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into an appropriate container for later disposal (see Section 13). Contaminated absorbent material may pose the same hazards as the spilled product. Do not use any combustible materials for clean-up (including cloth, etc.) as it presents a fire hazard upon drying out. Only use non-sparking tools and explosion proof equipment. Notify the appropriate authorities as required.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling	Use with adequate ventilation. Wear suitable protective equipment during handling. Avoid breathing mist or vapours. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Keep containers closed when not in use. Any combustible materials which contact the product should well-rinsed and laid flat to dry.
Conditions for Safe Storage	Store in a cool, dry, well ventilated area, away from incompatibles. Inspect periodically for damage or leaks. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Keep in original container. See NFPA 430, Code for the Storage of Liquid and Solid Oxidizers.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH® TLV®		NIOSH OEL	
	Urea	10 mg/m ³ , 8h (TWA)	<i>Not Established</i>	<i>Not Established</i>
Cobalt Nitrate	<i>Not Established</i>	<i>Not Established</i>	<i>Not Established</i>	0.02 mg/m ³ (TWA)
Sodium Borate	<i>Not Established</i>	<i>Not Established</i>	6 mg/m ³ (STEL)	2 mg/m ³ (TWA)
Sodium Molybdate	<i>Not Established</i>	<i>Not Established</i>	<i>Not Established</i>	0.5 mg/m ³ (TWA)

Notes	*Exposure limits may vary from time to time and from one jurisdiction to another. Check with local regulatory agency for the exposure limits in your area.
Appropriate Engineering Controls	Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.
Individual Protection Measures	
Eye/Face Protection	Wear splash goggles or other appropriate eye protection. Avoid wearing contact lenses.
Skin Protection	Wear impervious gloves. Avoid leather/cloth gloves.
Respiratory Protection	Not required under normal conditions of use. Do not breathe concentrated product. Wear

	respiratory protection if use will produce mists or splashing.
Other	An eyewash station and safety shower should be made available in the immediate working area.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Liquid	Relative Density (water = 1)	1.151 (9.61 lb/gal @ 68°F)
Odour	<i>Not Available</i>	Solubility in Water	Soluble
Odour Threshold	<i>Not Available</i>	Solubility in Other Liquids	<i>Not Available</i>
pH	4.5 - 6.5	Partition Coefficient, n-Octanol / Water (Log Kow)	<i>Not Available</i>
Melting Point and Freezing Point	<i>Not Available</i>	Auto-ignition Temperature	<i>Not Available</i>
Initial Boiling Point and Boiling Range	<i>Not Available</i>	Decomposition Temperature	<i>Not Available</i>
Flash Point	None up to 100°C (PMCC)	Viscosity	<i>Not Available</i>
Evaporation Rate	<i>Not Available</i>	Flammability (solid, gas)	<i>Not Applicable (Liquid)</i>
Vapour Density (air = 1)	<i>Not Available</i>	Upper and Lower Flammability or Explosive Limit	<i>Not Applicable</i>
Vapour Pressure	<i>Not Available</i>	Sensitivity to Static/Impact	Not Sensitive

SECTION 10. STABILITY AND REACTIVITY

Reactivity	Not known or expected.
Chemical Stability	Stable under normal conditions.
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Avoid contact with incompatible materials.
Incompatible Materials	Strong oxidizers, reducers.
Hazardous Decomposition Products	On combustion, forms toxic fumes of phosphorus oxides. Decomposes on contact with alcohols, aldehydes, cyanides, ketones, phenols, esters, sulfides or halogenated organics. This produces toxic fumes. Attacks many metals. This produces flammable/explosive gas.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation Skin contact Eye contact Ingestion

*Serious local effects by all routes of exposure.

Acute Toxicity	
LC50 (inhalation)	Iron EDTA - 2.75 mg/L (Rat - 4h)
	Sodium Borate - >2.04 mg/L (Rat - 4h)
LD50 (oral)	Calcium Nitrate - 302 mg/kg (Rat)
	Potassium Nitrate - 3750 mg/kg (Rat)
	Ammonium Nitrate - 2217 mg/kg (Rat)
LD50 (dermal)	<i>Not Reported</i>
Notes	

Skin Corrosion / Irritation	May cause irritation and redness.
Serious Eye Damage / Irritation	Redness. Pain. Tearing. Will be transient.
Inhalation	Causes coughing, shortness of breath, and irritation.
Ingestion	May cause irritation of the gastrointestinal tract including headache, nausea, vomiting, diarrhea.
STOT (Specific Target Organ Toxicity) - Single Exposure	Affects the respiratory tract and may cause damage to blood, mucous membranes.
Aspiration Hazard	Not reported.
STOT (Specific Target Organ Toxicity) - Repeated Exposure	Not Expected.
Respiratory and/or Skin Sensitization	Not known to be a sensitizer.
Carcinogenicity	Cobalt Nitrate is classified by IARC as a Group 2B Carcinogen: Possibly carcinogenic to humans but is present at less than 0.1% in this mixture.
Notes	Target Organs: Eyes.
Reproductive Toxicity	
Development of Offspring	Sodium Borate is a suspected reproductive toxicant, fetotoxicity.
Sexual Function and Fertility	Not reported.
Effects on or via Lactation	Not reported.
Germ Cell Mutagenicity	Not expected to be a mutagen.
Interactive Effects	Not reported.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity	Contains ingredient which are toxic to the aquatic environment with long lasting effects.		
	Ingredient	Species	LC/EC₅₀
	Calcium Nitrate	Rainbow Trout	LC ₅₀ 98.9 mg/L (96h)
	Ammonium Nitrate	Carp	LC ₅₀ 447 mg/L (96h)
	Sodium Borate	Goldfish	LC ₅₀ 178 mg/L (72h)
		Water Flea	EC ₅₀ 1085 mg/L (48h)
	Green Algae	LC ₅₀ 158 mg/L (96h)	
Persistence and Degradability	<i>Not Available</i>		
Bioaccumulative Potential	<i>Not Available</i>		
Mobility in Soil	<i>Not Available</i>		
Other Adverse Effects	<i>Not Available</i>		

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods	Canadian Environmental Protection Act: All ingredients are listed in the DSL. Dispose of in accordance with all federal, provincial/state, and local regulations. Consult with your local supplier for additional information.
RCRA	If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Technical Name (for N.O.S. entry)	Transport Hazard Class(es)	Packing Group
Canadian TDG Regulations*					
49 CFR/DOT*					
IATA Regulations*					
IMDG Code*					
Note:					
Notes: *NOT REGULATED FOR TRANSPORT					

SECTION 15. REGULATORY INFORMATION

US Federal Information						
Components listed below are present on the following U.S. Federal chemical lists:						
Ingredients	CAS Number	TSCA Inventory	CERCLA Reportable Quantity (RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313	
					Form R - Reporting Requirements	Supplier Notification
Calcium Nitrate	13477-34-4	Yes	No	No	No	No
Ammonium Nitrate	6484-52-2	Yes	No	No	Yes	Yes
Potassium Nitrate	7757-79-1	Yes	No	No	No	No
Urea	57-13-6	Yes	No	No	No	No
Cobalt Nitrate	10026-22-9	Yes	No	No	No	No
Iron EDTA	15708-41-5	Yes	No	No	No	No
Sodium Borate	1303-96-4	Yes	No	No	No	No
Sodium Molybdate	10102-40-6	Yes	No	No	No	No
Copper EDTA	39208-15-6	Yes	No	No	No	No
Manganese EDTA	15375-84-5	Yes	No	No	No	No
Zinc EDTA	14025-21-9	Yes	No	No	No	No

Other	California Prop 65 - Cobalt Nitrate is expected to cause cancer and is present at less than 0.1%
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Safety, Health and	Canadian Environmental Protection Act (CEPA):
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Environmental Regulations	All components of this product are on the Canadian DSL.
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NFPA Ratings	Hazard or Risk Scale (0 = minimal, 4 = Significant)	HMIS Ratings	Hazard or Risk Scale (0 = minimal, 4 = Significant)
Health	2	Health	2
Flammability	0	Flammability	0
Reactivity	1	Physical Hazards	0
Specific Hazard	OX	Personal Protection	X

SECTION 16. OTHER INFORMATION

Date of Creation	May 18, 2018
Date of Latest Revision	<i>Not Applicable</i>
Disclaimer	<p>This Safety Data Sheet (SDS) was prepared by iHazmat Regulatory Ltd., using information provided by the above supplier. To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.</p> <p>Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.</p>

***SDS compliant with WHMIS 2015 and OSHA HAZCOM 2012**