Safety Data Sheet
pH Down Premium pH Acidifier

SECTION 1. IDENTIFICATION

Product Identifier	**pH Down**
Other Means of Identification	Inorganic minerals in aqueous solution.
Recommended Use	Hydroponic systems
Restrictions on Use	*Not Applicable*
Initial Supplier Identifier	**Emerald Harvest** 1399 Corporate Center Parkway Santa Rosa, California 95407 USA Telephone: +1 866-325-8235
Emergency Telephone Number	**24 Hour Emergency Phone Number(s):** **INFOTRAC: 1-800-535-5053 (North America)** **INFOTRAC: 1-352-323-3500 (International)** **Contract number: 112430**

SECTION 2. HAZARD IDENTIFICATION

GHS Classification	**CORROSIVE TO METALS - CATEGORY 1** **SKIN CORROSION/IRRITATION - CATEGORY 1** **SERIOUS EYE DAMAGE/IRRITATION - CATEGORY 1**
Label Elements **Pictograms**	
Signal Word	**DANGER**
Hazard Statements	H290 – May be corrosive to metals. H314 – Causes severe skin burns and eye damage.
Precautionary Statements	
Prevention:	P234 – Keep only in original packaging. P260 – Do not breathe dusts or mists. P264 – Wash hands and affected areas thoroughly after handling. P271 – Use only outdoors or in a well-ventilated area. P280 – Wear protective gloves/protective clothing/eye protection/face protection.
Response:	P301 + P330 + P331 – IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 – IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P363 – Wash contaminated clothing before reuse. P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304 + P340 – IF INHALED: Remove person to fresh air and keep comfortable for breathing. P310 – Immediately call a POISON CENTER/doctor. P390 – Absorb spillage to prevent material-damage.

Storage:	P405 – Store locked up.
Disposal:	P501 – Dispose of contents/container to an approved waste disposal plant.
Other Hazards	*Not Applicable*
NOTES	

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration	Common name / Synonyms
Phosphoric Acid	7664-38-2	40 - 45%	*Not Applicable*
Non-hazardous ingredients or those below disclosure requirements	*Not applicable*	55% - 60%	*Not Applicable*

Notes	

SECTION 4. FIRST-AID MEASURES

Inhalation	If breathed in, move person into fresh air. Seek medical attention immediately.
Skin Contact	Rinse with plenty of water for at least 20 minutes. Take off contaminated clothing and shoes immediately. Get medical attention immediately.
Eye Contact	Rinse with plenty of water for at least 20 minutes. Remove contact lenses if easily possible. Refer immediately for medical attention. Continue to rinse during transport. Protect unharmed eye. Keep eye wide open while rinsing.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Get medical attention immediately.
Most Important Symptoms and Effects, Acute and Delayed	Acute: INHALATION: Inhalation of mists or aerosols may cause burning of the mucous membranes in the upper respiratory tract. Phlegm production will occur and cause coughing, moderate to severe irritation, and difficulty breathing. INGESTION: Causes severe stomach pains, nausea, vomiting, difficulty swallowing. SKIN CONTACT: Causes pain, irritation, redness, possible blistering. EYE CONTACT: Causes serious eye irritation or damage. Severe cases may cause permanent blindness. Chronic: *Not Applicable*
Immediate Medical Attention and Special Treatment	Treat symptomatically. Wear protective gloves when administering first aid. IN ALL CASES CONSULT A DOCTOR.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media	
Suitable Extinguishing Media	Not flammable, use extinguishing media appropriate for surrounding fire.
Unsuitable Extinguishing Media	*Not Applicable*
Flammability classification (OSHA 29 CFR 1910.106)	Not flammable.
Hazardous Combustion Products	Carbon oxides, phosphorus oxides. May produce corrosive and/or toxic fumes.
Specific Hazards Arising from the Product	Product is corrosive and may react with metals to evolve flammable hydrogen gas. Containers may explode when heated.

Special Protective Equipment and Precautions for Fire-Fighters	Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece. Move containers from fire area if safe to do so. Cool affected containers with water 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 wear the appropriate personal protective equipment. Do not touch spilled product. Ensure adequate ventilation. 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 corrosion resistant container for later disposal (see Section 13). Contaminated absorbent material may pose the same hazards as the spilled product. 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. Empty containers retain residue (liquid and/or vapour) and can be dangerous.
Conditions for Safe Storage	Store locked up 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.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH® TLV®		OSHA PEL	NIOSH REL
Phosphoric Acid	3 mg/m^3 (STEL 15 minutes)	1 mg/m^3 (TWA 8h)	1 mg/m^3 (TWA 8h)	1 mg/m^3 (TWA 10h)

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	Eye protection is required. Chemical safety goggles are recommended. Wearing contact lenses is not recommended.
Skin Protection	Gloves impervious to the material are recommended. Advice should be sought from glove suppliers. Depending on conditions of use, an impervious apron should be worn.
Respiratory Protection	Not required under normal conditions of use. Do not breathe concentrated product.
Other	An eyewash station and safety shower should be made available in the immediate working area.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear liquid	**Relative Density (water = 1)**	11.07 lb/gal at 68°F (1.32 kg/L at 20°C)
Odour	Odorless	**Solubility in Water**	Soluble
Odour Threshold	*Not Available*	**Solubility in Other Liquids**	Soluble in Alcohol
pH	2	**Partition Coefficient, n-Octanol / Water (Log Kow)**	*Not Available*
Melting Point and Freezing Point	-8°C (17.6°F)	**Auto-ignition Temperature**	*Not Available*
Initial Boiling Point and Boiling Range	*Not Available*	**Decomposition Temperature**	*Not Available*
Flash Point	None up to 100°C (PMCC)	**Viscosity**	*Not Available*
Evaporation Rate	*Not Available*	**Flammability (solid, gas)**	*Not Applicable (Liquid)*
Vapour Density (air = 1)	*Not Available*	**Upper and Lower Flammability or Explosive Limit**	*Not Applicable*
Vapour Pressure	*Not Available*	**Sensitivity to Static/Impact**	Not Sensitive

SECTION 10. STABILITY AND REACTIVITY

Reactivity	Reacts violently with bases.
Chemical Stability	Stable under normal conditions.
Possibility of Hazardous Reactions	The substance violently polymerizes under the influence of azo compounds and epoxides.
Conditions to Avoid	Avoid contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible Materials	Strong oxidizing agents, bases. Sensitive metals.
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

__X__ Inhalation __X__ Skin contact __X__ Eye contact __X__ Ingestion
***Serious local effects by all routes of exposure.**

Acute Toxicity	
LC50 (inhalation)	Phosphoric Acid - 1.689 mg/L (1h - Rabbit)
LD50 (oral)	Phosphoric Acid - 1530 mg/kg (Rat)
LD50 (dermal)	Phosphoric Acid - 2740 mg/kg (Rabbit)
Notes	Not acutely toxic based on human evidence.
Skin Corrosion / Irritation	Redness. Pain. Blisters. Serious skin burns.
Serious Eye Damage / Irritation	Redness. Pain. Severe burns.
Inhalation	Cough. Sore throat. Burning sensation. Shortness of breath. Laboured breathing.
Ingestion	Burns in mouth and throat. Burning sensation behind the breastbone. Abdominal pain. Vomiting. Shock or collapse.

STOT (Specific Target Organ Toxicity) - Single Exposure	May irritate upper respiratory tract.
Aspiration Hazard	Not reported.
STOT (Specific Target Organ Toxicity) - Repeated Exposure	Serious repeated exposure may cause increased incidence of kidney stones. Does not result in classification.
Respiratory and/or Skin Sensitization	Not known to be a sensitizer.
Carcinogenicity	IARC reports inadequate evidence for classification as human carcinogen.
Notes	Target Organs: Eyes, skin, respiratory system.
Reproductive Toxicity	
Development of Offspring	Not reported.
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	Not expected to be toxic to the aquatic environment.		
	Ingredient	**Species**	**LC/EC$_{50}$**
	Phosphoric Acid	*Not Available*	*Not Available*
Persistence and Degradability	Acidity may be neutralized by natural water hardness, but phosphate may persist indefinitely.		
Bioaccumulative Potential	Not expected to bioaccumulate.		
Mobility in Soil	Will infiltrate soil and follow groundwater flow if it reaches groundwater table.		
Other Adverse Effects	*Not Available*		

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	UN1805	PHOSPHORIC ACID SOLUTION	*Not Applicable*	8	III
49 CFR/DOT	UN1805	PHOSPHORIC ACID SOLUTION	*Not Applicable*	8	III
IATA Regulations	UN1805	PHOSPHORIC ACID SOLUTION	*Not Applicable*	8	III
IMDG Code	UN1805	PHOSPHORIC ACID SOLUTION	*Not Applicable*	8	III
	Note:				
Notes:					

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, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	De minimus Concentration
Phosphoric Acid	7664-38-2	Yes	5000 lbs (2270 kg)	No	No	No

Safety, Health and Environmental Regulations	Canadian Environmental Protection Act (CEPA): All components of this product are on the Canadian DSL.

NFPA Ratings	Hazard or Risk Scale (0 = minimal, 4 = Significant)	HMIS Ratings	Hazard or Risk Scale (0 = minimal, 4 = Significant)
Health	3	**Health**	3
Flammability	0	**Flammability**	0
Reactivity	0	**Physical Hazards**	0
Specific Hazard	0	**Personal Protection**	X

SECTION 16. OTHER INFORMATION

Date of Creation	April 17, 2018
Date of Latest Revision	October 22, 2019
Disclaimer	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. 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.

SDS compliant with WHMIS 2015 and OSHA HAZCOM 2012