MATERIAL SAFETY DATA SHEET

GENERAL HYDROPONICS pH Up™

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SECTION 1. MATERIAL IDENTIFICATION

Product Name: pH Up™

Chemical Family: Alkali.

Product Use: To raise the pH of hydroponic nutrient solutions and plant fertilizers.

Manufactured by: General Hydroponics, 3789 Vine Hill Rd. Sebastopol CA 95472. (707) 824-9376. Fax: (707) 824-9377

SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

The percentage of mixture information for pH Up™ is withheld as a trade secret. The basic ingredients of pH Up™ are potassium carbonate, potassium hydroxide, and potassium silicate.

Chemical name	CAS#	OSHA PELs	ACGIH TLVs	Toxicity Data
Potassium Carbonate	584-08-7	NE*	NE*	Estimated fatal dose 20 gm
Potassium hydroxide	131 0-58-3	2mg/m3	2mg/m3	Estimated fatal dose 5gm
Potassium silicate	1312-76-1	NE	NE	NE

*Not established

SECTION 3. HAZARDS IDENTIFICATION

*** Emergency Overview ***

General Hydroponics pH Up™ contains dilute alkalis. Ingestion can cause a shock-like state. In case of ingestion dilute the alkali by feeding water or milk. Eye and skin contact can cause irritation, dryness, chemical (alkaline) burns, and/or skin defatting, depending on the duration and intensity of the exposure. Immediately flush eyes or skin with deluge amounts of water. Seek medical care as soon as possible after ingestion or eye contact.

Potential Health Effects

Primary Entry Routes: Ingestion, inhalation, skin, eyes.

Target Organs: Mucous membrane of the respiratory system, eyes, and skin.

Acute Effects:

- **Ingestion:** Irritation and possible burns to gastrointestinal system.

- **Inhalation:** Irritation and possible burn of mucous membranes.
- Eye: Severe burns.
- **Skin:** Severe irritation and burns.

Carcinogenicity: IARC, NTP, and OSHA do not list any of the ingredients as carcinogenic.

Medical Conditions Aggravated by Long- Term Exposure: Pr-existing skin disorders.

Chronic Effects: Same as acute.

Other: None.

SECTION 4. FIRST AID MEASURES

Ingestion: Never give anything by mouth to an unconscious or convulsing person. Dilute the alkali by feeding water or milk, and seek immediate medical help.

Eye Contact: Do not allow victim to rub or keep eyes tightly shut. Gently lift eyelids and flush immediately and continuously with flooding amounts of water for at least 15 minutes. Consult a physician or ophthalmologist if pain or irritation develops.

Skin Contact: Wash exposed area with soap and water. For reddened or blistered skin, consult a physician.

Inhalation: Remove exposed person to fresh air and support breathing, if necessary. Consult a physician as soon as possible.

After first aid: Get appropriate community medical support.

SECTION 5. FIRE AND EXPLOSION DATA

Flash Point: Not flammable.

Auto-ignition Temperature: Not flammable.

LEL: Unknown.

Flammability Classification: Not flammable.

Burning Rate: Not flammable.

Extinguishing Media: Use dry chemical, carbon dioxide, water spray, fog, or foam.

Unusual Fire or Explosion Hazards: Container may explode in heat of fire.

Fire Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self contained breathing apparatus (SCBA) with a full-face piece.

Hazardous Combustion Products: Unknown.

Fire-Fighting Instructions: Do not release run-off from fire control methods to sewers or waterways.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Spill /Leak Procedures: Use personal protective equipment, neutralize with weak acid (acetic), and place in closed container for disposal. Flush spill area with water. In case of large spill, clear the area and notify appropriate emergency response activity.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

SECTION 7. HANDLING AND STORAGE

Handling Precautions: Avoid contact with skin and eyes, inhalation of aerosols and ingestion. Wear an appropriate NIOSH-approved respirator for protection where airborne concentrations are excessive. Respirator usage must be in accordance with OSHA requirements (29 CFR 1910.134).

Storage Requirements: Store as a corrosive in tightly closed containers away from acids.

Regulatory Requirements: Follow applicable OSHA regulations.

SECTION 8. EXPOSURE CONTROLS/personal protection

Engineering Controls: Provide general or local exhaust ventilation systems to maintain airborne concentrations as low as possible.

Administrative Controls: Avoid inhalation, ingestion, skin and eye contact.

Respiratory Protection: If this product is used as directed, respiratory protection is not required. Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/ NIOSH-approved respirator. If respirators are used, OSHA requires a written respiratory protection program that includes, at least: medical certification, training, fit testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

Protective Clothing/ Equipment: Use gloves and aprons while using.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Odor and Physical State: Blue liquid.

Odor Threshold Range: Odorless.

Vapor Pressure: Unknown.

pH: 12.

Specific Gravity: 1.09.

SECTION 10. STABILITY AND REACTIVITY

Stability: Stable at room temperature in closed containers, under normal storage and handling conditions.

Polymerization: Hazardous polymerization cannot occur.

Chemical Incompatibilities: Neutralization reaction will occur if exposed to alkaline materials.

Conditions to Avoid: Inhalation of mist.

Hazardous Decomposition Products: Unknown.

SECTION 11. TOXICOLOGICAL INFORMATION

Not believed to be toxic.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity: Unknown.

Environmental Fate: Not expected to be significant.

Environmental Degradation: Unknown.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Disposal: Follow Federal, State, and local regulations.

SECTION 14. TRANSPORTATION INFORMATION

DOT Transportation Data (49 CFR 172.101): Not listed.

SECTION 15. REGULATORY INFORMATION

EPA Regulations: Not listed.

SECTION 16. OTHER INFORMATION

General Hydroponics Diamond Nectar is a plant nutrition product. Information assembled for this Material Safety Data Sheet is for the use of this product as intended by the manufacturer. Users should take all precautions recommended herein while working with this product.

General Hydroponics provides the information contained herein in good faith, but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in using this product.