

MATERIAL SAFETY DATA SHEET

GENERAL HYDROPONICS pH Up™ Dry Concentrate

4/23/05

SECTION 1. MATERIAL IDENTIFICATION

Product Name: pH Up™ Dry Concentrate

Chemical Family: Caustic 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

For Chemical Emergency

Spill Leak Fire Exposure or Accident:

Call CHEMTREC Day or Night

DOMESTIC NORTH AMERICA 800-424-9300

INTERNATIONAL, CALL 703-527-3887 (collect calls accepted)

SECTION 2, INGREDIENTS AND OCCUPATIONAL EXPOSURE LIMITS

Ingredients: pH Up™ Dry Concentrate contains potassium carbonate and potassium citrate. The percentage of mixture information for pH Up™ Dry Concentrate is withheld as a trade secret.

Exposure Limits: Some of the chemicals used in pH Up™ Dry Concentrate, when inhaled in a powder form, are known to be irritants to the upper respiratory tract. OSHA has established a PEL for an eight-hour time weighted average of 5 mg/m³ (respirable fraction) or 15 mg/m³ eight-hour time weighted average (total dust). ACGIH has established a 10 mg/m³ eight-hour time weighted average threshold limit value for exposure to chemicals in this category. When these chemicals are in aqueous solution and are not aerosolized, they are not an inhalation hazard.

SECTION 3. HAZARDS IDENTIFICATION

*** Emergency Overview ***

WARNING! CAUSES IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. MAY BE HARMFUL IF SWALLOWED.

General Hydroponics pH Up™ Dry Concentrate contains potassium carbonate, a caustic alkali. Ingestion can cause a shock-like state. In case of ingestion, dilute the alkali by feeding water or milk, and allow vomiting to occur. 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 membranes 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: Pre-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. Drink two to four cups of milk, allow vomiting to occur, 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.

Hazardous Combustion Products: Unknown.

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

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

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 appropriate eye protection, and an 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 appropriate eye protection, gloves, and aprons while using pH Up™ Dry Concentrate.

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 dry powder.

Odor Threshold Range: Odorless.

Vapor Pressure: Unknown.

Water Solubility: completely soluble. **Other Solubilities:** Unknown.

Boiling Point / Freezing Point / Viscosity: Unknown.

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: Acids.

Conditions to Avoid: High temperatures and flames.

Hazardous Decomposition Products: Unknown.

SECTION 11. TOXICOLOGICAL INFORMATION

The toxicity of the combination of the chemicals, in the concentrations used in pH Up™ Dry Concentrate, is unknown. The oral rat LD50 for potassium carbonate is: 1870 mg/kg

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity: Unknown/

Environmental Fate: Not expected to be significant. Physical removal from air can occur via rainfall.

Environmental Degradation: Unknown.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Disposal: Follow Federal, State, and local regulations. Where possible, neutralize with weak acid (acetic).

SECTION 14. TRANSPORTATION INFORMATION

The chemicals in pH Up™ Dry Concentrate are not regulated by DOT.

SECTION 15. REGULATORY INFORMATION

EPA Regulations: Not listed.

SECTION 16. OTHER INFORMATION

General Hydroponics pH Up™ Dry Concentrate is a plant nutrition aid. 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.