MATERIAL SAFETY DATA SHEET

GENERAL HYDROPONICS STANDARD REFERENCE SOLUTION @ 25^0 C

5/18/10

SECTION 1. MATERIAL IDENTIFICATION

Product Name: Standard Reference Solution @ 25^0 C

Chemical Family: reference solution

Product Use: for calibration of EC and PPM conductivity meters

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

For Emergency Day or Night Call: CHEMTREC – Domestic North America 800-424-9300, International 703-527-3887 (collect calls accepted)

SECTION 2. INGREDIENTS AND OCCUPATIONAL EXPOSURE LIMITS

Ingredients: Standard Reference Solution @ 25^0 C is a specially formulated mixture of chemicals that are mixed in proportions to calibrate of EC and PPM conductivity meters. The chemical identity of the compounds and exact proportions used in the mixture are a trade secret.

Exposure Limits: No limits are established for exposure to the ingredients of Standard Reference Solution @ 25^0 C

SECTION 3. HAZARDS IDENTIFICATION

*** Emergency Overview ***

As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes and clothing

Potential Health Effects

Primary Entry Routes: ingestion, and skin contact

Ingestion: Ingestion may cause mild gastro-intestinal distress.

Eye: May cause mild irritation.

Skin: May cause mild irritation.

Inhalation: May cause mild irritation.

Carcinogenicity: IARC, NTP, and OSHA do not list any ingredients as a carcinogen.

Medical Conditions Aggravated by Long- **Term Exposure:** Unknown

Chronic Effects: No adverse health effects expected.

Other: None

Section 4. FIRST AID MEASURES

Ingestion: If swallowed, give several glasses of water to drink to dilute product. Never give anything by mouth to an unconscious person. Induce vomiting as directed by medical personnel. Call a physician.

Inhalation: Remove exposed person to fresh air and support breathing, if necessary. Consult a physician if respiratory distress develops.

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 mild soap and water. If skin irritation develops, consult a physician.

After First Aid: Get appropriate community medical support.

SECTION 5. FIRE AND EXPLOSION DATA

Flammability Classification: Standard Reference Solution @25^0 C is not combustible.

Flash Point: Unknown

Auto-ignition Temperature: Unknown

LEL: Unknown

Burning Rate: Unknown

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: none.

Special information: 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: Spills should be wiped up with absorbent materials, or mopped up carefully and held for reclamation or disposal.

Regulatory Requirements: Avoid infiltration of the undiluted product into drains, surface water, groundwater, and soil.

SECTION 7. HANDLING AND STORAGE

Storage: Keep product in sealed container when not in use.

Handling Precautions: Avoid ingestion, skin contact, eye contact, and inhalation

Storage Requirements: Keep in tightly closed containers in a cool, dry, ventilated area.

Regulatory Requirements: Follow applicable OSHA regulations.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Airborne Exposure Limits: None established

Ventilation: Provide general or local exhaust ventilation.

Administrative Controls: Avoid direct contact with the product.

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.

Eye Protection: when using Standard Reference Solution @25^0 C, contact lenses pose a special hazard. Soft lenses may absorb irritants, and all contact lenses concentrate irritants. Particles may adhere to contact lenses and cause corneal damage.

Protective Clothing: Wear impervious protective clothing when the possibility of skin or clothing contamination may exist. Wear neoprene or nitrile gloves when directly handling the product.

Contaminated Equipment: Remove this material from shoes and equipment. Launder contaminated clothing before wearing.

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Aqueous solution

Specific Gravity: 1.0

pH: 7

Appearance and Odor: clear liquid no odor

Odor Threshold Range: Unknown

Vapor Pressure: Unknown

Water Solubility: Soluble

Boiling Point: 100^0 c

Melting point: 1^0 c

Other Solubilities: Unknown

SECTION 10. STABILITY AND REACTIVITY

Stability: Stable under normal storage and handling conditions.

Chemical Incompatibilities: unknown

Conditions to Avoid: Mixture with incompatible materials, high temperatures

Hazardous Decomposition Products: unknown

SECTION 11. TOXICOLOGICAL INFORMATION

None of the chemicals are considered toxic in the concentrations used in Standard Reference Solution @25^0 C

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity: Unknown

Environmental Fate: Not expected to be significant

Environmental Degradation: Unknown

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Disposal: When possible, save wastes for recycling recovery; otherwise wastes should be managed in a waste disposal facility approved by local regulation.

SECTION 14. TRANSPORTATION INFORMATION

Not regulated

SECTION 15. REGULATORY INFORMATION

EPA Regulations: Not listed

SECTION 16. OTHER INFORMATION

Standard Reference Solution @25^0 C is a clear aqueous solution of chemicals mixed in concentrations for calibration of EC and PPM conductivity meters. 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.