

HYDROTEK INTERNATIONAL MFG (9069-2492 Québec Inc.)

ZETA™

1/11/05

SECTION 1. MATERIAL IDENTIFICATION

Product Name: ZETA™

Chemical Family: A mixture of plant nutrition minerals in aqueous solution.

Product Use: Hydroponic plant nutrient.

Manufactured by: Hydrotek International MFG (9069-2492 Québec Inc.) 12 300, Avenir Street, St-Janvier, Qc, J7J 2K4 Phone: (450)433-3336 Fax: (450)433-6494

SECTION 2. INGREDIENTS AND OCCUPATIONAL EXPOSURE LIMITS

Ingredients: The chemical identity of the compounds and exact proportions used in the mixture are a trade secret; however, they are derived from magnesium phosphate, phosphoric acid, potassium phosphate, potassium carbonate, potassium sulfate, and magnesium sulfate.

Exposure Limits: Some of the chemicals used in ZETA™, 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. As long as these chemicals remain in aqueous solution and do not become aerosolized, they are not an inhalation hazard.

SECTION 3. HAZARDS IDENTIFICATION

*** Emergency Overview ***

CAUTION! MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. MAY BE HARMFUL IF SWALLOWED.

Potential Health Effects

Primary Entry Routes: ingestion, inhalation, and skin contact.

Target Organs: Gastrointestinal system, blood system, skin, mucous membranes.

Ingestion: Ingestion can result in gastrointestinal distress, with abdominal pain, lethargy, nausea, vomiting, diarrhea, blood chemistry effects, cardiac effects, and central nervous system effects.

Eye: May cause irritation, redness, and pain.

Skin: Irritation.

Inhalation: Irritation.

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

Medical Conditions Aggravated by Long- term Exposure: Unknown.

Chronic Effects: Repeated or prolonged exposure to some ingredients can produce target organ damage.

Other: None.

Section 4. FIRST AID MEASURES

Ingestion: Give several glasses of water for dilution, and encourage vomiting. If symptoms persist seek medical attention.

Eye Contact: Do not allow victim to rub or keep eyes tightly shut. Remove contact lenses then 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: Unknown.

Auto-ignition Temperature: Unknown.

LEL: Unknown.

Flammability Classification: ZETA™ is not combustible..

Burning Rate: Unknown.

Extinguishing Media: Use dry chemical, carbon dioxide, water spray, fog, or foam for extinguishing surrounding fire.

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

Hazardous Combustion Products: Phosphorous oxides may form when heated to decomposition.

Fire-Fighting Instructions: Keep fire exposed containers cool with water spray. Remove containers from the fire area, if it can be done safely. 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: Wipe up with absorbent towels or mop.

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

SECTION 7. HANDLING AND STORAGE

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

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

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 breathing mist.

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 handling ZETA™, protective eyewear or goggles should be worn per OSHA regulations (29 CFR 1910.134). 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, when the possibility of skin or clothing contamination may exist. Wear neoprene or nitrile gloves when directly handling the product.

Safety Stations: Eye wash stations, quick drench showers, and washing facilities should be readily accessible to workers handling large quantities of ZETA™.

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.

Density: 1.162

pH: 3.5

Appearance and Odor: Pink liquid with no odor.

Odor Threshold Range: Unknown.

Vapor Pressure: Unknown.

Water Solubility: Soluble.

Other Solubilities: Unknown.

Freezing Point: 30°F

Viscosity: Unknown.

SECTION 10. STABILITY AND REACTIVITY

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

Polymerization: Hazardous polymerization does not occur.

Chemical Incompatibilities: Ethoxy ethyl alcohols, arsenates, phosphates, tartrates, lead, barium, strontium, and calcium.

Conditions to Avoid: High temperatures.

Hazardous Decomposition Products: Phosphorous oxides may form when heated to decomposition.

SECTION 11. TOXICOLOGICAL INFORMATION

Most of the chemicals in ZETA™ are toxic by ingestion, respiration, or dermal contact.

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 regulated

SECTION 15. REGULATORY INFORMATION

EPA Regulations: Not listed

SECTION 16. OTHER INFORMATION

Hydroteks Zeta[™] 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. Hydrotek 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.