

MATERIAL SAFETY DATA SHEET

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Section 1. PRODUCT IDENTIFICATION

PRODUCT NAME: VITAMIN E, K, A, plus D₃

CHEMICAL FAMILY - Vitamin and Electrolyte Blend

Section 11. COMPOSITION

Vitamins: A, D₃, E, MSBC (Vitamin K), Citric Acid, Sodium Bicarbonate, and the Electrolytes of Potassium and Sodium.

Section 111. PHYSICAL DATA

Melting Point -	Not Established
VAPOR PRESSURE:	Not Found
SOLUBILITY:	Freely in Water
APPEARANCE AND ODOR:	White-Yellowish Crystals, Characteristic to Vitamins
Specific Gravity:	(Water = 1) = N/A
Volatiles (% by weight):	N/A

Section IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT - Not Applicable. FLAMMABLE LIMITS - Not Applicable
Extinguishing Media: Any suitable means to extinguish surrounding fire. Carbon Dioxide Dry Chemical Preferred. May decompose to carbon dioxide or carbon monoxide.
Special Fire Fighting Procedures: Use special breathing equipment and protective clothing appropriate to the surrounding fire.
Bureau of Mines Rating = Weak

Section V. REACTIVITY DATA

THERMAL STABILITY - Stable under normal conditions of use and storage.
INCOMPATIBILITY - Alkalies, Alkaline Hydroxides.
CONDITIONS TO AVOID: Excessive heat, humidity, and exposure to incompatibles.
HAZARDOUS DECOMPOSITION PRODUCTS: At temperatures exceeding 250°C, This material may decompose Releasing Nox, Sox.

Section VI. HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

SYMPTOMS OF INGESTION: Large Doses! May cause burning pain in the Mouth, Esophagus and Stomach. Nausea, Vomiting, Abdominal Pain.

INHALATION: May cause Irrigation of the upper respiratory tract; symptoms may include Coughing, Sore Throat, and Shortness of Breath. May also cause symptoms similar to the Common Cold, including Chills, and Stuffiness of the Head.

SYMPTOMS OF SKIN CONTACT: May cause Irritation, Redness, and Pain.

SYMPTOMS OF EYE CONTACT: Dust may cause irritation.

CHRONIC EXPOSURE: Prolonged contact may cause skin irritation.

TOXICITY DATA:

Oral Toxicity : LD50: 11,700 mg/kg (RAT), DERMAL ACUTE 500 mg/24 hr. moderate,
EYE 750 mg/24 hr. severe.

SECTION VII. EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Immediately, Flush with large amounts of water for at least 15 minutes while holding eyelids apart. Washing within one minute is essential to achieve maximum effectiveness. Get immediate medical attention after flushing.

SKIN CONTACT: Wash affected area thoroughly with soap and water.

Remove contaminated clothing and launder before reuse. If irritation should develop, get medical attention.

INHALATION: Remove to Fresh Air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult a physician.

INGESTION: Never give anything by mouth to an unconscious person.

NOTES TO PHYSICIAN: None

SECTION IIX. INDUSTRIAL HYGIENE AND OCCUPATIONAL CONTROL PROCEDURES

VENTILATION: A system of local exhaust is recommended to keep employee exposure below the airborne exposure limits. Local exhaust is usually preferred because it controls the emission at its source, preventing "Dispersion of it into the general work area. Refer to the acgih document :Industrial Ventilation, a manual of recommended practices" for details.

RESPIRATORY PROTECTION: NIOSH/MSHA Approved respirator exposure may, or does exceed occupational exposure limits. Generally, a Dust/Mist respirator may be worn in areas where the TLV is exceeded up to ten times. Alternatively, a supplied air full facepiece respirator or airlined hood may be worn.

EYE PROTECTION: Chemical splash goggles or face shield. Contact lenses should not be worn working with this material.

SKIN PROTECTION: Use rubber or plastic impervious gloves and body covering clothing.

PERSONAL HYGIENE: Wash thoroughly after handling.

** An eye wash fountain and quick-drench facilities should be maintained in the work area.

SECTION IX. SAFE HANDLING, STORAGE, AND USE PRECAUTIONS

PRECAUTIONARY MEASURES: Avoid contact with skin, eyes, and clothing. Wear protective clothing, gloves, and splash goggles or shield. Wash thoroughly after using. Avoid breathing dust or mist. Use with adequate ventilation.

Store in a cool, dry, well ventilated area. Isolate from incompatible materials.

Protect from Physical Damage.

Aqueous solutions of Citric Acid can, if in contact with reactive metal (Iron, Zinc, Aluminum) can form hydrogen which may form explosive mixtures.

SECTION X. ENVIROMENTAL AND DISPOSAL PROCEDURES.

SPILL/LEAK CLEAN-UP PROCEDURES: Sweep, Scoop, or Pick-Up Spilled Material.

Avoid Dusting. Package for Reclamation or Recovery. Whatever cannot be saved may be disposed of in an approved landfill.

DISPOSAL METHOD: Dispose of in an approved Waste Landfill in accordance with applicable federal, system, and local regulations.

HAZARDOUS WASTE NO: NOT REGULATED

SARA TITLE III: N/A.

CANADIAN (WHMIS) LIST: N/A.

SECTION XI. ADDITIONAL WARNINGS AND INFORMATION.

Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date thereof, YS, Inc. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will YS, Inc. be responsible for damages of any nature whatsoever resulting from the use if or reliance upon information. No representations or warranties, either express or implied, of merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to information or the product to which information refers.

As with all chemical or vitamins this product should be stored away from small children, and used only in a manner consistent with label instructions.

Store in a cool dry area.

This product is a feed additive / micronutrient.

Dry powders can build static charges when subject to friction caused by conveyors, or mixing. Take adequate precautions such as grounding or inert atmospheres when the material is used in the presence of flammable materials.

