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MATERIAL SAFETY DATA SHEET

Section I: PRODUCT IDENTIFICATION

PRODUCT NAME: **VITA-ZYME (LIQUID)**
CHEMICAL FAMILY - VITAMIN AND ENZYME MIXTURE
Revised Date: 01.05.2009

Section II: COMPOSITION

| <i>Components</i> | <i>CAS Registry</i> | <i>Exposure</i> ACGIH TLV | <i>Limit</i> OSHA PEL |
|---|---------------------|------------------------------|--------------------------|
| 25 Hydroxyvitamin D ₃ | 19356-17-3 | | |
| Water | 7732-18-5 | | |
| Tween 80 | 9005-85-6 | | |
| BHT (2,6-di-terbuyl-p-cresol) Antioxidant | 128-37-0 | 10 mg/m ³ | 10 mg/m ³ |
| Ploysorbate 80K | 9005-65-6 | | |
| Phytase | 37288-11-2 | | |
| Sorbitol | 50-70-4 | | |
| Ascorbic Acid | 50-81-7 | | |
| Polyethylene Glycol 400 Monoolent (E) | 9004-96-0 | | |
| Vitamin E Acetate | 7695-91-2 | | |
| Ethoxyquin | 91-53-2 | | |
| Vitamin A Acetate | 127-47-9 | | |
| Peanut Oil | 7069-42-3 | | |
| N-Propanol | 71-23-8 | 200 PPM | 200 PPM |
| Vitamin D ₃ | 67-97-0 | | |

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Section III: PHYSICAL DATA

| | |
|--------------------------|-------------------|
| MELTING POINT: | > 300 |
| VAPOR PRESSURE: | Not Found |
| SOLUBILITY: | Soluble in Water |
| APPEARANCE: | Brown Liquid |
| SPECIFIC GRAVITY: | (Water =1) = 1.12 |
| VOLATILES (% BY WEIGHT): | N/A |
| ODOR: | Characteristic |
| FLASHPOINT: | Not Applicable |
| FLAMMABLE LIMITS: | Not Applicable |

Section IV: FIRE AND EXPLOSION HAZARD DATA

EXTINGUISHING MEDIA: Any suitable means to Extinguish Surrounding Fire (Dry Chemical, Carbon Dioxide, Foam or Water Fog). 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

This MSDS is based upon a limited review of ADM files and standard Toxicological handbooks. The Information herein is furnished without warranty of any kind. This information should only be used as a supplement to information already in your possession concerning the product listed above.

Section V: REACTIVITY DATA

| | |
|-----------------------------------|--|
| CHEMICAL STABILITY: | Stable |
| THERMAL STABILITY: | Stable under normal conditions of use and storage. |
| INCOMPATIBILITY: | Oxidizing Agents, Strong Acid. |
| CONDITIONS TO AVOID: | Excessive Heat, Humidity, and Exposure to Incompatibles. |
| HAZARDOUS DECOMPOSITION PRODUCTS: | Carbon Dioxide, Carbon Monoxide. |
| HAZARDOUS POLYMERIZATION: | Will Not Occur. |

Section VI: HEALTH HAZARD DATA

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

INHALATION: May cause Irritation of the Respiratory System.

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

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

CHRONIC EXPOSURE: Prolonged contact may increase Blood Calcium Levels, Kidney Stones, Bladder Stones, Weight Loss, Vomiting and Thyroid Effects.

TOXICITY DATA: Oral Toxicity: LD50: 320 mg/kg (RAT), DERMAL ACUTE 500 mg/24hr. Moderate, eye 750 mg/24hr. Severe.

Section VII: EMERGENCY AND FIRST PROCEDURES

EYE CONTACT: Immediately, Flush with Large Amounts of Water for at least 15 minutes while holding eyelids apart. Get immediate Medical attention after flushing if irritation continues.

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: If Swallowed, Dilute with Water and Immediately Induce Vomiting. Never give anything by mouth to an unconscious person.

NOTES TO PHYSICIAN: None

Section VIII: 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, supplied Air Full Face piece Respirator or Air Lined 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-Station Facilities should be maintained in the work area.**

SECTION IV: SAFE HANDLING, STORAGE, AND USE PRECAUTIONS

PRECAUTIONARY MEASURE: 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.

STORAGE: Store in a Cool, Dry, Well Ventilated Area. Isolate from Incompatible Materials.

Handling: Protect from Physical Damage.

SECTION X: ENVIROMENTAL AND DISPOSAL PROCEDURES

SPILL / LEAK CLEAN-UP PROCEDURES: Sweep, Scoop, or Pick-Up Spilled Material. 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, **IVESCO LLC**. Make 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 **IVESCO, LLC**. Be responsible (not accountable) for damages of any nature whatsoever resulting from the use of 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 the Product should be stored away from small children, and used only in a manner consistent with label instructions.

This Product is a Feed Additive / Micronutrient.

IVESCO, LLC.
TEL: 800*643*3064 / 800*433*9715
END OF MSDS
VITA-ZYME (LIQUID)
Revised Date: 01.05.2009
