

## Safety Data Sheet

### Section 1: Identification

**Product Name:** SMYZYME TS THERMOSTABLE PHYTASE 5000U/g and 10000U/g

**Recommended Use:** Primarily used in monogastric animal feeds to improve utilization ratio of total phosphorus

**Company Identification:**

Origination, LLC  
1802 Wooddale Drive, Suite 200  
Woodbury, MN 55125

**For information, call:** 1-800-625-6079

**Emergency Number:** 1-800-625-6079

**For CHEMTREC assistance, call:** 1-800-424-9300

**For International CHEMTREC assistance, call:** 703-527-3887

### Section 2: Hazard(s) Identification

**Classification of the Substance or Mixture GHS-US classification:** Combustible dust

**Respiratory sensitization:** Category 1

**GHS Label element**

**Hazard pictograms:**



**Signal word:** Danger

**Hazard statements:** H334 May cause allergy or asthma symptoms or breathing difficulties

**Precautionary statements (GHS-US):**

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P285 In case of inadequate ventilation wear respiratory protection.

**Response:**

P304 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.

**Disposal:** P501 Dispose of contents/ container to an approved waste disposal plant.

**Potential Health Effects**

**Inhalation:** May cause allergic respiratory reaction.

**Aggravated Medical Condition:** None known.

**Symptoms of Overexposure:** Inhalation may provoke the following symptoms: Allergic reactions, Asthma

## Section 3: Composition / Information on Ingredients

### Ingredients (CAS No.) Concentration

|                                            |        |
|--------------------------------------------|--------|
| 6-phytase (9001-98-2)                      | ≥ 1-5% |
| Corn starch(9005-25-8)                     | 70-90% |
| Magnesium sulfate (10034-99-8)             | 10-20% |
| Pregelatinized starch (9005-84-9)          | 1-5%   |
| Sodium Carboxymethyl Cellulose (9004-32-4) | 0.5-2% |

## Section 4: First Aid Measures

**First-aid measures general:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

**First-aid measures after inhalation:** Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor/physician if you feel unwell.

**First-aid measures after skin contact:** Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

**First-aid measures after eye contact:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**First-aid measures after ingestion:** Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

**Most important symptoms and effects, both acute and delayed: Symptoms/injuries after inhalation:** May cause respiratory irritation. **Symptoms/injuries after skin contact:** If skin irritation occurs get medical advice.

**Symptoms/injuries after eye contact:** If eye irritation occurs get medical advice.

**Most important symptoms and effects, both acute and delayed:** May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician:** Treat symptomatically.

## Section 5: Fire Fighting Measures

### Extinguishing Media

**Suitable extinguishing media:** Foam. Water spray or Fog.

**Special hazards arising from the substance or mixture:** No additional information available.

### Advice for Firefighters

**Firefighting instructions:** Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

**Protection during firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

## Section 6: Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures for non-emergency personnel**

**Emergency procedures:** Evacuate unnecessary personnel.

**For emergency responders**

**Protective equipment:** Equip cleanup crew with proper protection.

**Emergency procedures:** Ventilate area.

**Environmental precautions:** Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

**Methods and material for containment and cleaning up:** On land, sweep or shovel into suitable containers. Minimize generation of dust.

**Reference to other sections:** See Heading 8. Exposure controls and personal protection

## Section 7: Handling and Storage

**Precautions for Safe Handling:** Use personal protective equipment. Ensure adequate ventilation. Avoid breathing dust and dust formation.

**Hygiene measures:** Wash thoroughly after handling.

**Storage conditions:** Keep only in the original container in a cool, dry, well ventilated place away from direct sunlight. Keep container closed when not in use.

## Section 8: Exposure Controls, Personal Protection

**Exposure Controls**

**Personal protective equipment:** Avoid all unnecessary exposure.

**Hand protection:** Wear protective gloves.

**Eye protection:** Chemical goggles or safety glasses.

**Skin and body protection:** Wear suitable protective clothing.

**Respiratory protection:** If exposure limits are exceeded, NIOSH/MSHA approved respiratory protection should be worn.

**Other information:** Do not eat, drink or smoke during use.

## Section 9: Physical and Chemical Properties

**Information on basic physical and chemical properties:**

**Physical state:** Solid

**Appearance:** Granules.

**Color:** Off-white to light Tan.

**Odor:** Characteristic

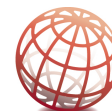
**Odor threshold:** No data available

**pH:** 5.0-6.0 in 1/100 distilled water.

**Melting point:** No data available

**Freezing point:** No data available

# Smizyme TS Thermostable Phytase



ORIGINATION, LLC

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**Boiling point:** No data available  
**Flash point:** No data available  
**Auto-ignition temperature:** No data available  
**Flammability (solid, gas):** No data available  
**Vapor pressure:** No data available  
**Relative vapor density at 20 °C:** No data available  
**Solubility:** Soluble  
**Log Pow:** No data available  
**Log Kow:** No data available  
**Viscosity, kinematic:** No data available  
**Viscosity, dynamic:** No data available  
**Explosive properties:** No data available  
**Oxidizing properties:** No data available  
**Explosive limits:** No data available

## Section 10: Stability and Reactivity

**Reactivity:** Not expected.  
**Chemical stability:** Stable under normal conditions.  
**Possibility of hazardous reactions:** None under normal processing.  
**Conditions to avoid:** Avoid dust formation.  
**Incompatible materials:** None know.  
**Hazardous decomposition products:** None known.

## Section 11: Toxicological Information

**Routes of Entry:** Inhalation, Skin.  
**Chronic Effects on Humans:** May sensitize respiratory tract.  
**Other Toxic Effects on Humans:** Skin contact may cause an irritation.  
**Special Remarks on Chronic Effects on Humans:** Not available  
**Special Remarks on other Toxic Effects on Humans:** Not available  
**Oral:** Oral LD50 (rat) > 2000 mg/kg  
**Dermal:** No information available  
**Inhalation:** LC50/inhalation/4h/rat >4.99 mg/l  
**Eye irritation:** Non-irritant  
**Skin irritation:** Non-irritating to the skin  
**Sensitization:** Not a skin sensitizer In mice. May cause sensitization in susceptible persons. Repeated inhalation of enzyme containing aerosol (dust or mist) can cause a respiratory allergy in some individuals.  
**Reproductive effects:** Developmental toxicity or Reproductive toxicity Not expected.

**Mutagenic effects:** Negative in Ames assay with and without metabolic activation up to 5000 µg/plate  
Negative in chromosome aberration using human lymphocytes with and without metabolic activation up to 5000 µg/ml

**Systemic Toxicity:** In a 90-day study in rats, there were no indications of toxicity or other changes attributed to treatment. A NOEL can be established at 144 mg/kg/d (TOS).

## Section 12: Ecological Information

**Ecotoxicity Effects:** The preparation is biodegradable.

**Ecotoxicological Effects:** Not harmful to aquatic and marine organisms when dissolved with copious amount of water.

## Section 13: Disposal Considerations (non-mandatory)

**Waste disposal recommendations:** Dispose in a safe manner in accordance with local/national regulations.

## Section 14: Transport Information

**In accordance with DOT.** Not regulated for transport.

**Harmonized Tariff Code** 3507.90.7000 (for enzymes).

**Harmonized System Code** 3507.90 (for enzymes).

## Section 15: Regulatory Information

The product does not have to be classified according to the criteria for the classification, packaging and labelling of dangerous substances and preparations of the Regulation EC No. 1272/2008 in compliance with Globally Harmonised System of Classification and Labelling of Chemicals (GHS). No symbol or risk phrase is required.

## Section 16: Additional Information

**Prepared by:** Origination, LLC

**Prepared:**

### Disclaimer:

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Origination be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Origination has been advised of the possibility of such damages.*