

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name Aextra® PHY 2500 TPT2 (US)

Other means of identification

Product Code A14100

Recommended use of the chemical and restrictions on use

Recommended Use Animal feed.

Details of the supplier of the safety data sheet

Supplier Address

Danisco US Inc.
Genencor, a Danisco Division
3490 Winton Place
Rochester, New York 14623 USA
+1 (585) 256-5200
+1 (800) 847-5311

E-mail address

SDS.Genencor@DuPont.com

Emergency Telephone Number

+1 (319) 368-7657. For a Distribution incident - Spill, Leak, or Accident
CALL CHEMTREC - 800-424-9300 (within US)
DuPont registration number 671983

2. HAZARDS IDENTIFICATION

Classification

| | |
|---------------------------|------------|
| Respiratory sensitization | Category 1 |
|---------------------------|------------|

Label Elements

Emergency Overview

Signal Word: DANGER

Hazard Statements

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled



Precautionary Statements

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

P285 - In case of inadequate ventilation wear respiratory protection
 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

Hazards not otherwise classified (HNOC)**Other Hazards**

None known

3. COMPOSITION/INFORMATION ON INGREDIENTS**Description****Preparation**

| Chemical Name | CAS No | % |
|---------------|-----------|----|
| Phytase | 9001-89-2 | <1 |

4. FIRST AID MEASURES**First Aid Measures****Eye Contact**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Skin Contact:

IF ON SKIN: Wash with plenty of water and soap. If skin irritation occurs: Get medical advice/ attention.

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

Ingestion

Rinse mouth thoroughly with water. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

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.

5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

Extinguish with alcohol-resistant foam, fire extinguishing powder or water spray.

Unsuitable Extinguishing Media None.

Special hazard

None known

Explosion Data

Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge No.

Protective Equipment and Precautions for Firefighters

Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide adequate protection.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Avoid generation of dust and aerosols. Avoid breathing dust or spray mist. Use personal protection recommended in Section 8.

Environmental Precautions

Contain spill.

Methods and material for containment and cleaning up

Methods for Containment Cover with absorbent or contain. Collect and dispose.

Methods for Cleaning Up Use appropriate personal protective equipment (PPE). Contain and/or absorb spill with inert material, then place in suitable container. Prevent runoff from entering drains, sewers or waterways.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid generation of dust and aerosols. Avoid contact with eyes, skin and clothing. Avoid breathing dust or spray mist.

Conditions for safe storage, including any incompatibilities

Conditions for safe storage, including any incompatibilities Keep container tightly closed in a dry and well-ventilated place. Protect from light. Keep/store only in original container.

Incompatible Products None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines Based on data available for ingredients.

Derived minimal effect level (DMEL) of 60 ng/m³ for workers and 15 ng/m³ for consumers has been derived for enzyme proteins.

Appropriate engineering controls

Engineering Measures Transfer via enclosed lines. Formulate in enclosed or ventilated mixing vessels. Carefully handle the substance to minimize releases. Avoid generation of dust and aerosols.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear safety glasses with side shields (or goggles).

Skin and Body Protection Wear protective gloves and protective clothing.

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical State Granules

Color Off-white to Light Tan

Odor

Typical odor of fermented product

Odor Threshold

No data available

pH

No data available

| | |
|--|-------------------|
| Melting point / freezing point | No data available |
| Boiling point / boiling range | No data available |
| Flash Point | No data available |
| Evaporation rate | No data available |
| Flammability (solid, gas) | No data available |
| Upper/lower flammability or explosive limits | |
| Upper Flammability Limit | No data available |
| Upper explosive limits | No data available |
| Lower Flammability Limit | No data available |
| Lower explosive limits | No data available |
| Vapor Pressure | No data available |
| Vapor Density | No data available |
| Relative density | No data available |
| Specific Gravity | No data available |
| Water Solubility | Soluble |
| Partition Coefficient (n-octanol/water) | No data available |
| Autoignition Temperature | No data available |
| Decomposition Temperature | No data available |
| Viscosity | No data available |

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 known.

Hazardous decomposition products

None known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Acute Toxicity

| | |
|---------------|---------------------------------------|
| Inhalation | No data available. |
| Eye Contact | Not expected to cause eye irritation. |
| Skin Contact: | Not expected to cause irritation. |
| Ingestion | Toxicity: Not expected |

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

| | |
|---------------------------------|--|
| Sensitization | May cause sensitization in susceptible persons. Repeated inhalation of enzyme containing aerosol (dust or mist) can cause a respiratory allergy in some individuals. |
| Mutagenic effects | No data available. |
| Carcinogenicity | No data available. |
| Reproductive effects | No data available. |
| STOT - single exposure | No data available. |
| STOT - repeated exposure | No data available. |
| Aspiration hazard | Not expected. |

Numerical measures of toxicity

Component Information Classification based on data available for ingredients.

Phytase

| | |
|-----------------------------|---|
| 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). |

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|----------------------|------------|------------|------------|------------|
| Phytase 9001-89-2 | None known | None known | None known | None known |

The following values are calculated based on chapter 3.1 of the GHS document (ATE)

ATEmix (oral) 7371 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

Classification based on data available for ingredients

0.0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Persistence and Degradability

Based on data available for ingredients

Bioaccumulation/Accumulation

No bioaccumulation potential

Mobility

Soluble in water

Other Adverse Effects

None known.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

| | |
|-------------------------------|--|
| Disposal Methods | Dispose of wastes in an approved waste disposal facility. Dispose of contents/containers in accordance with local regulations. |
| Contaminated Packaging | Dispose of empty containers and wastes safely. Dispose of waste product or used containers according to local regulations. |

14. TRANSPORT INFORMATION

| | |
|-------------------------------|----------------------------|
| Harmonized system code | 3507.90.7000 (for enzymes) |
| DOT UN/NA Number | Not regulated |

15. REGULATORY INFORMATION

US Federal Regulations

| Chemical Name | SARA 313 - Threshold Values % | CERCLA/SARA - Section 302 Extremely Haz |
|---------------|-------------------------------|---|
| Phytase | Not listed | Not listed |

16. OTHER INFORMATION

| | |
|-----------------------------|-------------------------------|
| Prepared By | SDS.Genencor@DuPont.com |
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| SDS sections updated | First edition in this format. |

Disclaimer

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End of Safety Data Sheet