

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name Phyzyme® XP 5000L
Material Number A14070
Chemical nature Enzyme Preparation.
Formula Not applicable.
Synonyms Not applicable.
Recommended Use Animal feed.
Company/undertaking identification: Danisco Animal Nutrition
 PO Box 777
 Marlborough
 Wiltshire SN81XN
 United Kingdom
 Tel: +441672 517777.
E-mail Address SDS.Genencor@Danisco.com
Emergency telephone: +1 (319) 368-7657, a Distribution incident - Spill, Leak, or Accident
 CALL CHEMTREC - 800-424-9300 (within US)
 DuPont registration number 671983

2. HAZARDS IDENTIFICATION

Potential Health Effects Inhalation of enzyme mist/dust may cause allergic respiratory reactions, including asthma, in susceptible individuals on repeated exposure.

Eyes May cause slight irritation.
Skin May cause slight irritation.
Inhalation May cause slight irritation.
Ingestion Not expected to be toxic by ingestion.

Aggravated Medical Conditions Atopy. Asthma.

Physical and chemical hazards The data available do not support any physical or chemical hazard.
Environmental Hazard See Section 12 for additional Ecological Information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Description Enzyme Preparation.

Chemical Name	CAS-No	%	OSHA	ACGIH
Phytase	9001-89-2	<1	Not Listed	Not Listed

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4. 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. If eye irritation persists: Get medical advice/attention.
Skin Contact	IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs, seek medical advice/attention.
Inhalation	IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.
Ingestion	Rinse mouth with water. If swallowed. Call a POISON CENTER or doctor/physician if exposed or you feel unwell.
Notes to Physician	May cause allergic respiratory reaction.

5. FIRE-FIGHTING MEASURES

Flammable Properties	Not flammable.
Suitable extinguishing media	Standard procedure for chemical fires. Foam. Water.
Protective Equipment and Precautions for Firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Use only with adequate ventilation/personal protection. Avoid breathing dust or spray mist. Avoid formation of dust and aerosols. For personal protection see section 8.
Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Cleaning Up	Pick up and transfer to properly labeled containers.

Phyzyme® XP 5000L**7. HANDLING AND STORAGE**

Precautions for safe handling	Avoid formation of dust and aerosols. Avoid breathing dust or spray mist. Avoid prolonged contact with eyes, skin and clothing.
Conditions for safe storage, including any incompatibilities	Keep container tightly closed in a dry and well-ventilated place.
Technical Measures/Precautions	Ensure adequate ventilation.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines Component information below is as complete as possible. Any fields not shown indicate no data is presently available.

Occupational Exposure Controls

Engineering Measures Process enclosure and/or ventilation systems. Ensure adequate ventilation. Any equipment used to handle this product, should be designed to minimize the escape of aerosols and dust.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

Personal Protective Equipment

Eye/Face Protection Safety glasses with side-shields.
Skin and Body Protection Impervious gloves.
Respiratory Protection Use NIOSH approved respiratory protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Brown	Odor:	Typical odor of fermented product.
Physical State:	Liquid	pH	4.4-4.8
Flash Point	>100 °C / >210 °F	Method	PMCC.
Autoignition Temperature	Not applicable.	Decomposition Temperature	Not determined.
Boiling Point/Range	Not determined.	Melting Point/Range	Not applicable.
Freezing point (°C) VALUE	-15 °C	Flammability Limits in Air	Not applicable.
Explosion Limits	Not applicable.	Specific Gravity	1.05-1.15 g/ml
Water solubility	Soluble.	Evaporation Rate	Not determined.
Vapor Pressure	Not determined.	Vapor Density	Not determined.
Viscosity	2.5 cPs @ 24°C.		

Phyzyme® XP 5000L**10. STABILITY AND REACTIVITY**

Stability	Stable under recommended storage conditions.
Incompatible Products	None known.
Conditions to avoid	None known.
Hazardous Decomposition Products	None known.
Hazardous Polymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION**Product Information**

Acute toxicity	
Oral	Not expected to be toxic by ingestion.
Dermal	No data available.
Inhalation	No data available.
Irritation	
Eye irritation	May cause slight irritation.
Skin irritation	May cause slight irritation.
Respiratory irritation	May cause slight irritation.
Sensitization	Inhalation of enzyme mist/dust may cause allergic respiratory reactions, including asthma, in susceptible individuals on repeated exposure.
Systemic toxicity	There is no data available for this product.
Mutagenic effects	Not expected to cause mutagenic effects.
Reproductive effects	This product does not contain any known or suspected reproductive hazards.

Component Information

Component information below is as complete as possible. Any fields not shown indicate no data is presently available.

Phytase

Oral	LD50/oral/rat > 2000 mg/kg.
Dermal	No data available.
Inhalation	LC50/inhalation/4h/rat >4.99 mg/l.
Eye irritation	Not an irritant.
Skin irritation	Not an irritant.
Sensitization	Not a dermal sensitizer in the mouse.
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).
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.
Reproductive effects	Not expected to produce reproductive or developmental toxicity.
Carcinogenicity	Not classified as a carcinogen by IARC, OSHA, or NTP.

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12. ECOLOGICAL INFORMATION

Ecotoxicity effects	Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.
Mobility	Soluble.
Persistence and Degradability	Enzymes are considered readily biodegradable.
Bioaccumulation/Accumulation	Bioaccumulation is unlikely.
<u>Component Information</u>	Component information below is as complete as possible. Any fields not shown indicate no data is presently available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods	In accordance with local and national regulations.
Packaging	If empty container retains product residues, all label precautions must be observed. Store away from ignition sources. Transport with all closures in place. Return for reuse or dispose according to national or local regulations.

14. TRANSPORT INFORMATION

Harmonized Tariff Code:	3507.90.7000 (for enzymes).
DEPT. OF TRANSPORTATION UN OR NA NUMBER	Not classified as dangerous in the meaning of transport regulations.
Hazard class	Not hazardous.
Packing group	Not applicable.
Reportable Quantity	Not applicable

Phyzyme® XP 5000L**15. REGULATORY INFORMATION****HAZARD RATING SYSTEMS:**

HMIS (SCALE 0-4, WHERE 4=SEVERE HAZARD): Health: 2 Flammability: 1 Reactivity: 0

U.S. Federal Regulations

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

U.S. State Regulations

This product does not contain any Proposition 65 chemicals.

16. OTHER INFORMATION

Prepared By SDS.Genencor@Danisco.com

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Changes since last date of revision: First Edition.

Disclaimer

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