

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

Product Identifier

Product Name Aextra® XAP 101 TPT

Other means of identification

Material Number A30205

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@Danisco.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/physician

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

None Known

Toxicity: None Known

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

Chemical Name	CAS-No	%
Talc	14807-96-6	1-5
Starch	9005-25-8	1-5
Subtilisin	9014-01-1	1-5
Sucrose	57-50-1	1-5
Xylanase	9025-57-4	1-5
Alpha Amylase	9000-90-2	<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. If eye irritation persists: Get medical advice/attention.

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. 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. Use personal protection recommended in Section 8.

Environmental Precautions

Contain spill. Keep out of waterways.

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.

Chemical Name	ACGIH TLV	OSHA 8 Hr. TWA:	NIOSH IDLH
Subtilisin 9014-01-1	Ceiling: 0.00006 mg/m ³	None Known	None Known
Dust, non-specific RR-00072-6	TWA: 10 mg/m ³ TWA: 3 mg/m ³	15 mg/m ³ TWA 5 mg/m ³ TWA	None Known
Sucrose 57-50-1	TWA: 10 mg/m ³	15 mg/m ³ TWA 5 mg/m ³ TWA	None Known
Talc 14807-96-6	TWA: 2 mg/m ³	None Known	1000 mg/m ³
Starch 9005-25-8	TWA: 10 mg/m ³	15 mg/m ³ TWA 5 mg/m ³ TWA	None Known

Appropriate engineering controls**Engineering Measures**

Transfer via enclosed lines. Formulate in enclosed or ventilated mixing vessels. Carefully handle the substance to minimize releases of dust/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, NIOSH/MSHA approved respiratory protection should be worn.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical State Solid Fine granular.

Color Tan

Odor Odorless.

Odor Threshold No data available

pH No data available

Melting point/freezing point No data available

Boiling point / boiling range Not determined

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 Not determined

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**

There is no data available for this product.

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

There is no data available for this product.

Carcinogenicity

There is no data available for this product.

Reproductive effects

There is no data available for this product.

STOT - single exposure

There is no data available for this product.

STOT - repeated exposure

There is no data available for this product.

Aspiration hazard

Not expected.

Numerical measures of toxicity**Component Information**

Classification based on data available for ingredients.

*Subtilisin***Oral**

Oral LD50 (rat) =1800 mg/kg

Inhalation

LC50/inhalation/4h/rat 0.8 mg/l.

Eye irritation

Causes severe eye irritation

Skin irritation

May cause skin irritation

Respiratory irritation

May cause irritation of respiratory tract

Sensitization

Patch test on human volunteers did not demonstrate sensitization properties.

Reproductive effects

This product does not contain any known or suspected reproductive hazards.

Mutagenic effects

Negative in chromosomal aberration using human lymphocytes. Negative in Ames assay with and without metabolic activation up to 5000 µg/plate.

Systemic toxicity

In a 90-day feeding study with rats, no evidence of toxicity attributed to treatment was seen at levels up to 50000 ppm/d. A NOAEL was established at > 50000 ppm/d.

*Xylanase***Inhalation**

LC50/inhalation/4h/rat > 5.1 mg/l.

Eye irritation

Not an irritant.

Skin irritation

Not an irritant.

Sensitization

Inhalation of enzyme mist/dust may cause allergic respiratory reactions, including asthma, in susceptible individuals on repeated exposure. May cause sensitization by inhalation.

Mutagenic effects

Not mutagenic in bacterial assays in the presence and absence of metabolic activation up to 5,000 µg/plate. Negative in chromosomal aberration using human lymphocytes.

Systemic toxicity

In a 90-day study in rats, there were no indications of toxicity or other changes attributed to treatment. A NOAEL can be established at 1140 mg/kg/d.

*Alpha Amylase***Oral**

Oral LD50 (rat) 2000 mg/kg

Inhalation

No data available.

Eye irritation

Not an irritant.

Skin irritation Not an irritant.
Mutagenic effects Negative in Ames assay with and without metabolic activation up to 5000 µg/plate. Negative in chromosomal aberration using human lymphocytes with and without metabolic activation up to 5000 µg/ml. Data from similar enzyme.
Systemic toxicity In a 90-day study with rats, the NOEL was found to be 1000 ppm. In a 14-day feeding study with rats, a NOAEL was established at 5,000 ppm. Data from similar enzyme.

Talc

Eye irritation May cause slight irritation.
Skin irritation May cause slight irritation.
Respiratory irritation May cause slight irritation.
Sensitization Not a skin sensitizer
Reproductive effects No Developmental toxicity In rats
Mutagenic effects Negative in the chromosomal aberration assay. Negative in dominant lethal assay in rat up to 5000 mg/kg . Negative in DNA Damage and Repair Assay. Negative in Ames assay with and without metabolic activation up to 20 mg/plate.

Starch

Eye irritation May cause mild irritation.
Skin irritation May cause mild irritation.
Respiratory irritation May cause mild irritation.

Sucrose

Oral LD50/oral/rat 29700 mg/kg.
Eye irritation May cause slight irritation.
Skin irritation May cause skin irritation
Respiratory irritation May cause respiratory tract irritation

Chemical Name	ACGIH	IARC	NTP	OSHA
Talc 14807-96-6	None Known	Group 3	None Known	None Known
Starch 9005-25-8	None Known	None Known	None Known	None Known
Subtilisin 9014-01-1	None Known	None Known	None Known	None Known
Sucrose 57-50-1	None Known	None Known	None Known	None Known
Xylanase 9025-57-4	None Known	None Known	None Known	None Known
Alpha Amylase 9000-90-2	None Known	None Known	None Known	None Known

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

ATEmix (oral) 10649 mg/kg.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Classification based on data available for ingredients

0% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Toxicity to algae	Toxicity to fish
Talc 14807-96-6	No data	Brachydanio rerio LC50 = 100000 mg/L.
Subtilisin 9014-01-1	NOEC = 0.041 mg protein/l (72 h). (Pseudokirchneriella subcapitata).	LC50: 8.2 mg/L (96 h) Rainbow trout.

Persistence and Degradability

Based on data available for ingredients

Chemical Name	Biodegradation
Talc 14807-96-6	No data.

Subtilisin 9014-01-1	Readily biodegradable (102 % after 29 days).
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Bioaccumulation/Accumulation

No bioaccumulation potential

Mobility

Soluble in water

Other Adverse Effects

None Known

13. DISPOSAL CONSIDERATIONS**Waste treatment methods****Waste 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 Tariff Code 3507.90.7000 (for enzymes)

DEPT. OF TRANSPORTATION UN OR NA NUMBER Not regulated

15. REGULATORY INFORMATION**U.S. Federal Regulations**

Chemical Name	SARA 313 - Threshold Values %	CERCLA/SARA - Section 302 Extremely Haz
Talc	Not listed	Not listed
Starch	Not listed	Not listed
Subtilisin	Not listed	Not listed
Sucrose	Not listed	Not listed
Xylanase	Not listed	Not listed
Alpha Amylase	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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Revision Number 1

SDS sections updated None

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

END OF SDS