

Safety Data Sheet

Form: Powder

Section 1: Identification

Product Name: Bromelain (Ananas comosus)
Recommended Use: See Specification Sheet.
Supplier Information: Enzymology Research Center, Inc
 332 West Street North
 Miliona, MN 56354 U.S.A.
 Phone: 1.218.943.9127 - Fax: 1.218.943.9128
info@ercenzymes.com
Emergency Phone: Phone: 1.218.943.9127

Section 2: Hazard Identification

Hazard Class: Skin Irritant Category 2
 Eye Irritant Category 2B
 Respiratory Sensitizer Category 1

Signal Word: Warning.
 Avoid the formation of aerosol and dust of the product.

Hazard Statement: H315 + H320 - Causes skin and eye irritation.
 H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H335 - May cause respiratory irritation.



Pictograms:

Precautionary Statement: P261 -Avoid breathing dust/vapors/spray.
 P264 -Wash exposed skin thoroughly after handling
 P280 - Wear protective gloves/protective clothing/eye and face protection (see section 8).
 P284 - In case of inadequate ventilation, wear respiratory protection.

Other Hazards: None.

Section 3: Composition/Information on Ingredients

Name: Bromelain **CAS Number:** 9001-00-07

Section 4: First Aid Measures

Inhalation: If inhaled, remove from contaminated area to fresh air. Report situation. Seek medical attention if allergic response is exhibited.

Eye Contact: In case of contact with eyes, flush eyes with low pressure water for at least 20 minutes. If irritation develops, seek medical attention.

Skin Contact: In case of contact with skin, wash skin with soap and water. Remove contaminated clothing & wash.

Ingestion: If swallowed, rinse mouth and throat thoroughly with tap water. Drink water.

Section 5: Fire Fighting Measures

Flash Point: Not available.

Flammable Limits: Lower: Not available.
 Upper: Not available.

Explosive Dust Limits: Not available.

Extinguishing Media: Water spray, dry chemical, carbon dioxide or foam as appropriate for surrounding fire and materials.

Unsuitable Extinguishing Media: None, except when not appropriate for surrounding fire and material.

Protection of Firefighters:	Firefighters should use self-contained breathing equipment and full fighting turnout gear.
Hazardous Combustion Products:	When heated to decomposition, material may emit toxic fumes.
Hazardous Arising from Product:	Material is assumed to be combustible; therefore, as with all the potentially combustible dusts, Class II Division 1 electrical installation is advised for all mechanical equipment the powder will come in contact with to reduce the potential for static electricity buildup. Keep away from sources of ignition, spark and open flames. Provide adequate dust control.

Section 6: Accidental Release Measures

Personal Precautions,	Use only with adequate ventilation/personal protection. Avoid breathing dust or spray mist. Avoid formation of dust and aerosols (See Section 8). Prevent further leakage or spillage if safe to do so. Spilled product should be removed immediately to avoid formation of dust. Vacuum or moisten with water and collect into a sealable container for disposal. Flush spill area with plenty of water (low pressure) into approved sewer. Avoid formation of aerosols and dusts. Ensure good ventilation. Water contaminated clothing.
Emergency Procedures:	
Containment Methods:	
Cleanup Procedures:	

Section 7: Handling and Storage

Safe Handling:	Never handle powder without appropriate personal protective equipment in accordance with Section 8. Avoid formation of dust. Avoid splashing and high pressure washing. Ensure good ventilation of the room when handling this product.
Storage:	Store container in a dry, cool place.

Section 8: Exposure Controls / Personal Protection

Exposure Limit:	Not available.
Industrial Hygiene:	Maintain good conditions of industrial hygiene. Have eye wash facilities and safety shower immediately available.
Appropriate Engineering Controls:	Adequate ventilation required for dusty conditions.
Respiratory Protection:	None required under usual conditions of use. However, if exposure potential exists, refer to NIOSH Criteria Guides to determine appropriate unit.
Hand Protection:	Impermeable gloves recommended.
Eye Protection:	Wear protective glasses or eye shield.

Section 9: Physical and Chemical Properties

Appearance:	Tan to light brown color.
Odor:	Typical bromelain odor.
Odor Threshold:	Not available.
Vapor Pressure:	Not available.
Vapor Density:	Not available.
pH:	4.0 - 9.0
Relative Density:	Not available.
Melting Point/Freezing Point:	Not available.
Solubility:	Dispersible in water.
Initial Boiling Point and Boiling Range:	Not available.
Flash Point:	Not available.
Evaporation Rate:	Not available.
Flammability (Solid, Gas):	Not available.
Upper/Lower Flammability or Explosive Limits:	Not available.
Partition Coefficient: n-octanol/water:	Not available.
Auto-Ignition Temperature:	Not available.
Decomposition Temperature:	Not available.
Viscosity:	Not available.

Section 10: Stability and Reactivity

Reactivity:	Not available.
Chemical Stability:	Stable under normal storage conditons.
Hazardous Reactions:	Not available.

Conditions to Avoid: Not available.
Incompatible Materials: Not available.
Hazardous Decomposition Products: Not available.

Section 11: Toxicological Information

Routes of Exposure: Eye contact, skin contact, ingestion, inhalation.
Symptoms: Immediate: Can cause irritation to the eyes, skin, mucus membranes and the upper respiratory tract.
Delayed: Chronic inhalation exposure may lead to allergic sensitization based on exposure level, duration and susceptibility.
Acute Toxicity: Not available.
Eye Irritation: May cause minor irritation.
Skin Irritation: May cause minor irritation.
Respiratory Irritation: May cause minor irritation.
Sensitization towards Product: Inhalation of enzyme mist or dust may cause allergic respiratory reactions, including asthma, in susceptible individuals on repeated exposure.
Germ Cell Mutagenicity: Not available.
Reproductive Toxicity: Not expected to produce reproductive toxicity.
Carcinogenicity: Not classified as a carcinogen by IARC, OSHA or NTP.

Section 12: Ecological Information

Ecotoxicity: Not available.
Persistence and Degradability: Product is readily biodegradable.
Bioaccumulative Potential: Not available.
Mobility in Soil: Not available.
Other adverse effects: Not available.

Section 13: Disposal Considerations

No special disposal method required, except that in accordance to all applicable federal, state and local regulations.

Section 14: Transport Information

UN Number: Not classified.
UN Proper Shipping Name: Not classified.
Transportation Hazard Class: Not classified.
Packing Group: Not classified.
Transport Environmental Hazard: Not classified.
Transport Special Precautions: Not classified.
MARPOL: Not classified.

Section 15: Regulatory Information

The active ingredient and all components of the enzyme preparation are listed on the TSCA Inventory.

Section 16: Other Information

Any person who experiences any allergic or sensitive reactions to this powder should refrain from handling it again.

GHS 2015 Format

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