

MATERIAL SAFETY DATA SHEET

I Product Identification

COMPANY NAME: Calgon Vestal Laboratories
ADDRESS: 5035 Manchester Avenue
St. Louis, Missouri 63110
PRODUCT NAME: Klenzyme
SYNONYMS: Medical Apparatus and Instrument Presoak

Nights: 314-802-2000
CHEMTREC: (800) 424-9300
Product No.: 1103

II Hazardous Ingredients of Mixtures

Material	(CAS#)	% by Wt.	TLV	PEL
Subtilisins (Proteolytic enzymes)	(9014-01-1)	< 5	.06ppb	N/A
Sodium tetraborate, decahydrate	(1303-96-4)	< 5	5mg/m3	10mg/m3

III Physical Data

Vapor Pressure, mmHg: N/A
Evaporation Rate (ether = 1): N/A
Solubility in H₂O: Complete
Freezing Point F: N/A
Boiling Point F: > 212F
Specific Gravity H₂O = 1 @ 25C: 1.08

Vapor Density (Air = 1) 60–90 F: Undeterm.
% Volatile by wt: N/A
pH @ Undiluted Solution: N/A
pH as Distributed: 7.5–8.0
Appearance: Amber liquid
Odor: Typical, mild odor

IV Fire and Explosion

Flash Point F: N/A
Extinguishing Media: Not flammable. In event of fire, use water fog, CO₂, and dry chemical.
Special Fire Fighting Procedures: No special requirements given. As with any chemical fire, proper cautions should be taken, such as wearing a self-contained breathing apparatus.
Unusual Fire and Explosion Hazards: None known

Flammable Limits: N/A

V Reactivity Data

Stability-Conditions to avoid: Stable
Incompatibility: None known
Hazardous Decomposition Products: Propionaldehyde, CO, CO₂ in fire situations
Conditions Contributing to Hazardous Polymerization: Will not occur

VI Health Hazard Data

Effects of Overexposure (Medical Conditions Aggravated/Target Organ Effects)

- A. *Acute* (Primary Route of Exposure)
Eyes & Skin: Upon contact, mildly irritating to eyes. Prolonged or repeated contact may irritate skin.
Inhalation: Spray mists or dusts from dried residues may result in respiratory irritation, coughing and/or difficulty in breathing.
Ingestion: May cause upset to gastrointestinal tract.
- B. *Subchronic, Chronic, Other:* Subtilisins chronic exposure to dusts showed allergic sensitization with respiratory allergic reactions within minutes or delayed up to 24 hours.

VII Emergency and First Aid Procedures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes. See a physician.
Skin: Immediately wash with soap and plenty of water for at least 15 minutes while removing contaminated clothing. If irritation develops, seek medical aid.
Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing difficult, give oxygen if available. Seek medical aid and report all inhalation exposures to health and safety personnel.
Ingestion: Do not induce vomiting. Give water to dilute. Call a physician. Never give anything by mouth to an unconscious person.

VIII Spill or Leak Procedures

Spill Management: Contain spill and absorb material with an inert substance. Collect waste in suitable container.

Waste Disposal Methods: Dispose of in accordance with local, state, and federal regulations.

IX Protection Information/Control Measures

Respiratory: Not required under normal use

Eye: Safety glasses

Glove: Rubber

Other Clothing and Equipment: Clothes sufficient to avoid contact

Ventilation: Local exhaust

X Special Precautions

Precautions to be taken in Handling and Storing: Avoid exposure to high temperature or humidity. Wash hands thoroughly after use. Keep container closed when not in use.

Additional Information: Read and observe all labeled precautions.

Prepared by: R. C. Jente

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