

Material Safety Data Sheet



Martrex, Inc.

Section 1: Chemical Product and Company Information

Product name: FerMax Protease

Reference Number: n/a

Web: www.martrexinc.com

Supplier/ Further Information: Martrex, Inc.

P. O. Box 1709

Phone: 952/933-5000

14525 Highway 7

Toll Free: 800/328-3627

Minnetonka, Minnesota 55345-3793

FAX: 952/933-1889

EPA Registration Number: n/a

CAS#: 9025-49-4

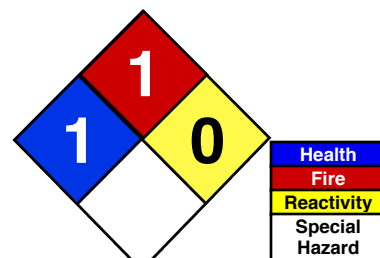
Chemical Name: n/a

Synonyms: FerMax Protease, Protease-Aspergillus niger

Chemical Family: Enzyme

Product Use: n/a

MSDS Number: n/a



For Rating Explanation see Section 16

24 Hour Emergency Phone - Chemtrec Transport: 1-800-424-9300; Medical: 1-800-441-3637

Section 2: Composition/Information on Ingredients

| Component | CAS# | Source | Hazardous? | OSHA Limits | ACGIH Limits |
|-----------------|-----------|-------------------|------------|-------------|--------------|
| FerMax Protease | 9025-49-4 | Aspergillus niger | no data | no data | no data |

Section 3: Hazards Identification

Health Hazard Information:

Potential allergic reaction and/or breathing problem if aerosol inhaled.

Potential Health Effects:

Eye:

Product is not known to cause eye irritation. However, it is recommended that direct contact with eyes be avoided.

Skin:

Product is not irritating to skin. However, it is recommended that prolonged contact with skin be avoided.

Ingestion:

Ingestion of material is not known to result in significant adverse health effects.

Inhalation:

May cause sensitization by inhalation in hypersensitive individuals. Avoid aerosol generation.

Signs and Symptoms of Exposure:

The allergic symptoms are such as runny nose, cough, sneeze, languor, slight attack of fever.

See Section 11 for more Toxicological information

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1-800-441-3637 Medical**

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 15 minutes. If irritation develops, seek medical attention.

Skin Contact:

In case of contact with skin, wash skin with soap and water. Remove contaminated clothing and wash.

Ingestion:

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

Section 5: Fire Fighting Measures

Flash Point/Ignition Temperature:

Protection Against Fire & Explosions:

Under normal use no special requirements.

Explosion Characteristics: N/A

Hazardous Decomposition Products: None

Suitable Fire Extinguishing Media: Water, foam, halon

Special Fire Fighting Information: Wear appropriate personal protective equipment as specified in Section 8.

Hazardous Combustion Products: See Section 10 Reactivity Incompatibilities.

Section 6: Accidental Release Measures

If a spill occurs:

Spilled product should be removed immediately to avoid formation of aerosol. 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 sufficient ventilation. Wash contaminated clothing.

Spill and Leak Personal Procedures: Wear appropriate personal protective as specified in Section 8.

Environmental and Regulatory Reporting: See Sections 12, 13 and 15

Section 7: Handling and Storage

Handling:

Never handle liquid without appropriate personal protective equipments in accordance with Section 8. **Avoid formation of aerosol.** 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

Respiratory Protection:

None required under usual condition 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.

Hygienic Work Practices: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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Section 9: Physical and Chemical Properties

| | |
|--|------------------------------------|
| Boiling Point (760mm Hg): 100 -105°C to 1.3 | Specific Gravity: 1.1 |
| Evaporation rate (butyl acetate =1): As water | % Volatile by Volume: 0 |
| Appearance & Odor: Brown liquid-typical fermentation odor | Pour Point: N/A |
| Vapor Pressure at 20 degrees: As water | Vapor Density (air=1): 0.62 |
| Solubility in water, % by weight: Completely miscible | pH Value: 3.8 - 8.0 |

Section 10: Stability and Reactivity

Stability: Stable
Hazardous Decomposition or Byproducts: N/A

Section 11: Toxicological Information

Inhalation of aerosol may cause respiratory allergy in susceptible individuals.

Oral rat LD₅₀: >2g/kg-classifies product as "non-toxic".
Carcinogen: Not classified as a carcinogen by IARC, OSHA, or NTP.

Section 12: Ecological Information

Product is readily biodegradable.

Section 13: Disposal Considerations

Waste Disposal Procedures: No special disposal method required, except that disposal of spilled material should be in accordance with applicable federal, state and local environmental regulatory requirements.

Section 14: Transport Information

Road/Rail: Not classified
Sea: Not classified
Air: Not classified

Section 15: Regulatory Information

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

Section 16: Other Information



Additional Information: Any person who experiences any allergic or sensitive reactions to this liquid should refrain from handling it again.

ACGIH - American Conference of Governmental Industrial Hygienists
ANSI - American National Standards Institute
CAS - Chemical Abstracts Service
CERCLA - Comprehensive Environmental Response, Compensation & Liability Act of 1980
CFR - Code of Federal Regulations
CHEMTREC - Chemical Transportation Emergency Center
CPR - Controlled Products Regulations
CWC - Chemical Weapons Convention
DOT - U.S. Department of Transportation
DSL - Canadian Domestic Substance List
EHS - Extremely Hazardous Substance

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EPA - U.S. Environmental Protection Agency
HMIS - Hazardous Material Identification System
IARC - International Agency for Research on Cancer
LEL/UEL - Lower and Upper Explosive Limit
mg/m³ - Milligrams per cubic meter
MSDS - Material Safety Data Sheet
NAERG - North American Emergency Response Guidebook
NIOSH - National Institute of Occupational Safety and Health
NFPA - National Fire Protection Association
NTP - National Toxicology Program
OSHA - Occupational Safety and Health Administration
PEL - Permissible Exposure Limit (set by OSHA)
PPE - Personal Protective Equipment
RCRA - Resource Conservation and Recovery Act of 1976
SARA - Superfund Amendments and Reauthorization Act
TDG (Canadian): Transport of Dangerous Goods Regulations
TLV - Threshold Limit Value (set by ACGIH)
TWA - 8-hour Time Weighted Average
TSCA - US Toxic Substance Control Act
WHMIS - Workplace Hazardous Material Information System

MSDS Issue Date: n/a
Revised Date: 10-25-2011
Supersedes: n/a

|  NFPA Rating Explanation Guide | | | | | |
|---|---|---|---|---|--|
| Rating Number | Health Hazard | Flamibility Hazard | Instability Hazard | Rating Symbol | Special Hazard |
| 4 | Can be lethal | Will vaporize and readily burn at normal temperatures | May explode at normal temperatures and pressures | ALK | Alkaline |
| | | | | ACID | Acidic |
| 3 | Can cause serious or permanent injury | Can be ignited under almost all ambient temperatures | May explode at high temperature or shock | BIO | BioHazard |
| | | | | COR | Strong Corrosive |
| 2 | Can cause temporary incapacitation or residual injury | Must be heated or high ambient temperature to burn | Violent chemical change at high temperatures or pressures | CRYO | Cryogenic |
| | | | | OXY | Oxidizer |
| 1 | Can cause significant irritation | Must be preheated before ignition can occur | Normally stable. High temperatures make unstable |  | Radioactive |
| | | | | W | Reacts violently or explosively with water |
| 0 | No Hazard | Will not burn | Stable | W OX | Reacts violently or explosively with water or oxidizer |

This chart for reference only - For complete specifications consult the NFPA Standard

The information contained in this Safety Data Sheet, as of the issue date, is believed to be true and correct. However, the accuracy or completeness of this information and any recommendations or suggestions are made without warranty or guarantee. Since the conditions of use are beyond the control of the company, it is the responsibility of the user to determine the conditions of safe use of this product. The information does not represent analytical specifications.