



MATERIAL SAFETY DATA SHEET

1. Product And Company Identification

Product Name: MetriZyme®

Manufacturer: METREX® RESEARCH
1717 W. Collins Ave.
Orange, CA 92867
U.S.A.

Information Phone Number: 1-800-841-1428 (Customer Service)

Canadian Importer: Sybron Canada LP
250 First Gulf Boulevard
Brampton ON L6W4T5
Canada
(714) 516-7788

Chemical Emergency Phone Number (Chemical Spills, Leaks, Fire, Exposure or Accident only):
CHEMTREC 1-800-424-9300 (in the US) 1-703-527-3887 (Outside the US)
In Canada Canutec: 1 (613) 996-6666 (24 hours)

MSDS Date Of Preparation/Revision: 12/19/2012

Product Use: Dual Enzymatic Detergent.

2. Hazards Identification

Bluish-green liquid. Mint odor.

EMERGENCY OVERVIEW

Causes eye irritation. May cause skin irritation. Inhalation of mists may cause irritation of the mucous membranes and upper respiratory tract. Inhalation of mists may cause an allergic reaction, particularly in sensitized individuals.

3. Composition/Information On Ingredients

Component	CAS No.	Amount
Propylene glycol	57-55-6	10-30%
Nonionic Surfactants	Proprietary	10-20%
Fragrance Oil	Proprietary	5-10%
Proteinase subtilisin	9014-01-1	0.1-1%
Water and non-hazardous ingredients	Mixture	30-60%



4. First Aid Measures

Inhalation: Move to fresh air if effects occur and seek medical attention if effects persist.

Skin Contact: Wash with soap and water. Seek medical attention if irritation develops and persists. Remove and launder contaminated clothing.

Eye Contact: Hold eye open and rinse slowly and gently with water for 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Seek medical attention if irritation develops and persists.

Ingestion: If the victim is alert, have them rinse their mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Do not attempt to give anything by mouth to an unconscious person. Seek medical advice by calling a Poison Center or doctor.

5. Fire Fighting Measures

Extinguishing Media: Use any extinguishing media that is appropriate for the surrounding fire. Cool fire exposed containers with water.

Special Fire Fighting Procedures: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

Unusual Fire Hazards: None known.

Hazardous Combustion Products: Burning residual after water has evaporated may produce carbon monoxide, carbon dioxide, nitrogen oxides, and hydrocarbons.

6: Accidental Release Measures

Wear appropriate protective clothing and equipment (See Section 8). Collect material with an inert absorbent material and place in appropriate, labeled container for disposal. Refer to Section 13 for disposal advice.

7. Handling and Storage

Avoid contact with eyes, skin and clothing. Avoid generating and breathing mists. Wear appropriate eye protection and gloves when handling (see Section 8). Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Store at room temperature.

8. Exposure Controls / Personal Protection**Exposure Limits**

Chemical	Exposure Limit
Propylene glycol	10 mg/m ³ TWA AIHA WEEL 10 mg/m ³ (as particulate), 155 mg/m ³ (as total vapor and particulates) (Ontario)
Nonionic Surfactants	None Established
Fragrance Oil	None Established
Proteinase subtilisin	0.00006 mg/m ³ (as 100% crystalline active pure enzyme) TWA ACGIH Ceiling Limit (Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland, Labrador, Nova Scotia, Nunavut, Prince Edward Island, Saskatchewan, Ontario; Quebec, Northwest Territories, Yukon)

Ventilation: General ventilation should be adequate for normal use. For operations where the exposure limits may be exceeded, mechanical ventilation such as local exhaust may be needed to minimize exposure.

Respiratory Protection: None under normal use conditions with adequate ventilation. For operations where the occupational exposure limits are exceeded, a NIOSH approved respirator with particulate cartridges is recommended. Equipment selection depends on contaminant type and concentration. Select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

Gloves: Impervious gloves such as butyl rubber or nitrile are recommended.

Eye Protection: Safety goggles are recommended for operations where eye contact is possible.

Other Protective Equipment/Clothing: Wear protective clothing if needed to avoid prolonged/repeated skin contact.

9. Physical and Chemical Properties

Appearance and Odor: Clear blue liquid. Coastal breeze scent.

Boiling Point:	100-105°C	Specific Gravity:	>1.07
Solubility in Water:	Complete	pH:	7.5-8.5
Vapor Pressure:	Same as water	Vapor Density:	Same as water
Percent Volatile:	>50%	Melting/Freezing Point:	Not Determined
Coefficient of Water/Oil Distribution:	Not Determined		
Flash Point:	Not flammable or combustible	Flammable Limits:	Not applicable

10. Stability and Reactivity

Stability: Stable

Conditions To Avoid: Avoid excessive heat.

Incompatibility: Strong oxidizing agents, strong acids and bleach.

Hazardous Decomposition Products: Thermal decomposition will produce carbon monoxide, carbon dioxide, nitrogen oxides, and hydrocarbons.

Hazardous Polymerization: Will not occur.

11. Toxicological Information

Potential Health Effects:

Acute Hazards:

Inhalation: May cause minor irritation of the nose, throat and upper respiratory tract. Inhalation of mists may cause an allergic reaction in individuals sensitized to enzymes.

Skin Contact: Prolonged or repeated exposure may cause mild irritation.

Eye Contact: May cause irritation with tearing, redness and pain.

Ingestion: Ingestion may cause gastrointestinal disturbances.

Chronic Hazards: None currently known.

Medical Conditions Aggravated By Exposure: None currently known.

Carcinogen: None of the components is listed as a carcinogen or potential carcinogen by IARC, NTP, ACGIH, or OSHA.

Acute Toxicity Values:

Propylene Glycol: LD50 Oral Rat 20,000 – 34,000 mg/kg; LD50 Dermal Rabbit >20,000 mg/kg

Trisodium Citrate Dihydrate: No data available. Not acutely toxic.

Proteinase subtilisin: LD50 Oral Rat >2000 mg/kg

12. Ecological Information

Toxicity: No data available for product

Persistence and degradability: No data available for product

Bioaccumulative Potential: No data available for product

Mobility in Soil: No data available for product



13. Disposal Considerations

Solution Disposal: For unused solution, flush thoroughly with large quantities of water into sewage disposal system in accordance with Federal, State, and local regulations. For used solution, the waste solution must be characterized by the generator and disposed of in accordance with Federal, State, and local regulations.

Container Disposal: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. If recycling is not available, discard in trash.

14. Transport Information

U.S. DOT Hazard Classification

Proper Shipping Name: Not Regulated

Technical Name: N/A

UN Number: N/A

Hazard Class/Packing Group: N/A

Labels Required: N/A

DOT MARINE POLLUTANTS: This product does not contain Marine Pollutants as defined in 49 CFR 171.8.

Canada TDG

Proper Shipping Name: Not Regulated

Technical Name: N/A

UN Number: N/A

Hazard Class/Packing Group: N/A

Labels Required: N/A

IMDG Code Shipping Classification

Proper Shipping Name: Not Regulated

UN Number: N/A

Hazard Class: N/A

Packing Group: N/A

Labels Required: None

Placards Required: None

Not classified as a marine pollutant

ICAO Air Transport Classification

Proper Shipping Name: Not Regulated

ID Number: N/A

Hazard Class: N/A

Packing Group: N/A

Labels Required: None



15. Regulatory Information

EPA SARA 311/312 Hazard Classification: Acute Health, Chronic Health

EPA SARA 313: This Product Contains the Following Chemicals Subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): None

Protection Of Stratospheric Ozone: This product is not known to contain or to have been manufactured with ozone depleting substances as defined in 40 CFR Part 82, Appendix A to Subpart A.

CERCLA SECTION 103: This product is not subject to CERCLA reporting requirements; however, many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

EPA TSCA Inventory: All of the components of this material are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory or exempt.

Canadian Regulations

National Pollutant Release Inventory (NPRI): This Product Contains the Following Chemicals Subject to Annual Release Reporting Requirements NPRI: None

WHMIS Classification: Class D-2-A

This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the MSDS contains all the information required by the *Controlled Products Regulations*.

16. Other Information

NFPA Rating: Fire: 0 Health: 2 Instability: 0

The information and recommendations set forth herein are taken from sources believed to be accurate as of the date of preparation, however, METREX® RESEARCH makes no warranty with respect to the accuracy or suitability of the recommendations, and assumes no liability to any use thereof.