



MATERIAL SAFETY DATA SHEET
ULTRADOSE ENZYME PLUS
ULTRASONIC CLEANING SOLUTION with ENZYME and RUST INHIBITOR

PCN(s): 013

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REV: Original

1. SUPPLIER AND EMERGENCY INFORMATION

L&R Manufacturing Company
577 Elm Street, P.O. Box 607
Kearny, NJ 07032 - 0607 USA

Product Information
Call: **201-991-5330**

Emergency Phone Numbers:

For emergencies involving a spill, leak, fire or accident contact: CHEMTREC - **800-424-9300** within the United States or **703-527-3887** for international collect calls

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	Percentage
Water	7732-18-5	40 - 50
Sodium metasilicate	6834-92-0	7 - 11
Disodium Cocoamphodiacetate	68608-65-1	15 - 25
Disodium Cocoamphodiproionate	n/a	4 - 8
Nonylphenoxypolyethoxyethanol	9016-45-9	5 - 10
1,2 Propanediol	57-55-6	1 - 5
Bacterial Protease	9014-01-1	1 - 10

3. HAZARDS IDENTIFICATION

Physical appearance and odor: Dark blue-green liquid with little to no odor.

A: WARNING STATEMENT: Good industrial hygiene practices should be used when handling this Material.

Acute Eyes: Direct contact causes moderate irritation

Acute Skin: Direct contact causes moderate irritation. Prolonged or repeated contact causes redness, and drying.

Acute Inhalation: Breathing high concentrations of vapors or mists may cause irritation to the nose and respiratory tract.

Acute Ingestion: Will cause irritation to the digestive tract and signs of nervous system depression.

B: POTENTIAL HEALTH EFFECTS:

Chronic Effects: This product does not contain any ingredient designated by IARC, NTP, ACGIH or OSHA as a probable or suspected human carcinogen.

4. FIRST AID MEASURES

Eye Exposure: Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Seek medical attention.

Skin Exposure: Wash thoroughly with water. If irritation or redness develops, seek medical attention.

Inhalation: If respiratory irritation or distress occurs, move victim to fresh air. Seek medical attention if respiratory irritation or distress continues.

Ingestion: Seek immediate medical attention. INDUCE VOMITING AS DIRECTED BY MEDICAL PERSONNEL.

MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE: Skin contact may aggravate existing skin disease.

5. FIRE FIGHTING MEASURES

FIRE HAZARD DATA:

FLASH POINT: NOT COMBUSTIBLE

Flammability limits (vol/vol%) : Lower: No Data Upper: No Data

Extinguishing Media: Extinguish with dry chemical, CO₂ or a BC/ABC extinguisher.

Special Fire Fighting Procedures: None known

Unusual Fire and Explosion Hazards: Product may burn under fire conditions. Closed containers may explode due to built-up pressure when exposed to extreme heat.

Hazardous Decomposition Materials: (under fire conditions) Oxides of nitrogen and carbon.

6. ACCIDENTAL RELEASE MEASURES

Cleanup and Disposal of Spill: Biodegradable product. Mop up spill and dispose of by dilution to a sanitary sewer system as permitted by local, state and federal regulations.

Environmental and Regulatory Reporting: Not required

7. HANDLING AND STORAGE

Minimum/Maximum Storage Temperatures: 39 to 100 °F. Protect from freezing

HANDLING: AVOID CONTACT WITH SKIN, EYES OR CLOTHING

8. EXPOSURE CONTROL/PERSONAL PROTECTION

General: These recommendations provide general guidance for handling of this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. When developing safe handling procedures, do not overlook the need to clean and dispose of the material. Waste resulting from the use of this product should be handled in accordance with Section 13: Disposal Considerations.

Exposure Guidelines: Exposure limits are recommended worker breathing limits. The following limits apply to this material:

<u>INGREDIENTS</u>	<u>LIMITS</u>	<u>INGREDIENT</u>	<u>LIMITS</u>
Water	None established		
Nonylphenoxypolyethoxyethanol	None established		

8. EXPOSURE CONTROL/PERSONAL PROTECTION, CONTINUED

Engineering Controls: Normal room ventilation.

Respiratory Controls: For reasonable uses of this material, respiratory protection should not be necessary.

Eye/Face Protection: Safety glasses to protect from splashing.

Skin Protection: Rubber or plastic gloves to avoid drying and irritation to the skin.

Work Practice Control: Normal hygiene in the work area should be taken when working with or handling this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Appearance: Deep green liquid

pH: 12-12.5 as concentrate

Water Solubility: Soluble,

Freezing Point Range: 32 °F

Vapor Pressure: Not established

Percent volatile by volume: Approx. 50 % by volume

Odor: Characteristic detergent odor.

Specific Gravity: 1.185-1.205

Melting Point Range: Not available

Boiling Point : >212 degrees F

Vapor Density: Not established

V.O.C. (calculated) : 1.71 lbs./ gal or 360 grams /l.

10. STABILITY AND REACTIVITY

Chemical Stability:

This material is stable under normal handling and storage conditions as described in Section 7.

Conditions to be avoided: Heat, open flame.

Materials/Chemicals to be avoided: Strong acids and oxidizing agents.

Decomposition type: Thermal Oxides of carbon, nitrogen and sulfur.

Hazardous Polymerization: WILL NOT OCCUR

Avoid the following to inhibit hazardous polymerization: NOT APPLICABLE.

11. TOXICOLOGICAL INFORMATION

Acute Eye Irritation: Irritating to eyes.

Acute Skin Irritation: Irritating to the skin

Acute Dermal Toxicity: No test data found for product.

Acute Respiratory Irritation: No test data found for product.

Acute Inhalation Toxicity: No test data found for product.

Acute Oral Toxicity:

LD50 (rat) = 2660 mg / .kg for sodium tetraborate

LD50 (rat) = 4 gm / kg for Nonylphenoxypolyethanol

Chronic Toxicity: This product does not contain any substances that are considered by OSHA, NTP, IARC OR ACGIH to be a probable or suspected human carcinogen. No additional test data was found for this product.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information: No data found.

13. DISPOSAL CONSIDERATIONS

This product is biodegradable and can be disposed in sanitary sewer system where permitted by local, federal and state regulations.

14. TRANSPORTATION INFORMATION

It is NOT regulated as hazardous. Do not stack cartons more than five high.

15. REGULATORY INFORMATION

Inventory Issues: All components of this product are listed on the U.S. TSCA, Canadian DSL, European EINECS/ELINS chemical listings

16. OTHER INFORMATION

National Fire Protection Association

Hazard Rating, NFPA

Health	Flammability	Reactivity	Special
2	0	0	--

MSDS CHANGES

<u>REV</u>	<u>DATE</u>	<u>DESCRIPTION OF CHANGE</u>
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Prepared By: L&R Manufacturing Company Date: 11/01/05
Product Name: ULTRADOSE ULTRASONIC CLEANING SOLUTION with ENZYME and RUST INHIBITOR