

UNITED LABORATORIES INTERNATIONAL LLC
MATERIAL SAFETY DATA SHEET
Zyme-HT® Z11

Revised: July 25, 2013

Revision Number: 4

1. Company and Product Identification

Trade Name:	Zyme-HT® Z11
Application:	Contaminant neutralizer and ammonia remover
Manufacturer/Supplier:	United Laboratories International, LLC 12600 North Featherwood Drive Suite 330 Houston, Texas 77034 Phone: (281) 443-0300 Fax: (713) 672-3988
Emergency Contact:	Chemtrec: (352) 323-3500
Prepared By:	Technical Specialist: (281) 443-0300

2. Composition/Information on Ingredients

All chemicals are considered non-hazardous according to California Proposition 65, are non-hazardous according to OSHA 29 CFR 1910.1200, and are not reportable under SARA III Section 313; unless otherwise noted below.

Component	CAS #	%	ACGIH TLV	OSHA PEL
-	-	-	-	-

3. Hazard Identification

Emergency Overview: Prolonged exposure may cause irritation to the skin and eyes. Wash affected areas with soap and water.

Primary Routes of Exposure: Eyes, skin.

- **Eyes:** May cause redness, irritation, tearing.
- **Skin:** May cause irritation.
- **Inhalation:** Repeated exposure may cause irritation to the trachea, lungs, or coughing.
- **Ingestion:** May cause irritation to the mouth, esophagus, and stomach. Can cause nausea, vomiting and diarrhea.

HMIS	
Zyme-HT® Z11	
Health	1
Flammability	0
Physical Hazard	0
PPE	B

Chronic Exposure: Repeated exposure through any route may cause symptoms similar to acute toxicity.

Special Precautions: Not available.

4. First Aid Measures

Eye Contact: Flush with water for at least 20 minutes, occasionally lifting upper and lower eyelids. Seek medical attention immediately.

Skin Contact: Flush affected area with plenty of water for at least 20 minutes. Remove contaminated clothing and/or footwear. Wash contaminated clothing and/or footwear before reuse. Seek medical attention if irritation persists.

Ingestion: Immediately rinse mouth and drink plenty of water. Do not induce vomiting. Never give anything via mouth to an unconscious person. See medical attention immediately.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration if necessary. If breathing is difficult, give oxygen. Seek medical attention immediately.

Special Precautions: Not available.

5. Fire Fighting Measures

Fire: Not considered to be a fire hazard.

Explosion: Not considered to be an explosion hazard.

Fire Extinguishing Media: Use any means for extinguishing surrounding fires.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved SCBA with full face-piece operated in the pressure demand or positive pressure mode.

6. Accidental Release Measures

Spill or Leak: Ventilate the area of the leak or spill. Wear protective equipment as specified in Section 8. This product is biodegradable and small amounts can be discharged to industrial sewers. Do not flush bulk releases to sewer or release into waterways.

- **Small Spill or Leak:** Collect in an appropriate container or absorb with an inert material (i.e., vermiculite, dry sand, diatomaceous earth) and place in a chemical waste container. Do not use combustible materials, such as saw dust.
- **Large Spill or Leak:** For containment, dike far ahead of spill. Cover with inert material (i.e., vermiculite, dry sand, diatomaceous earth) and place material in an approved chemical waste container. Do not use combustible materials, such as saw dust.

Regulatory Requirements: U.S. Regulations (CERCLA) require reporting spills and/or releases to soil, water, and air in excess of reportable quantities. The toll free number for the U.S. Coast Guard National Response Center is (800) 424-8802.

7. Handling and Storage

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat and incompatibilities. Protect from freezing. Observe all warnings and precautions listed for this product.

8. Exposure Control/Personal Protection

Skin Protection: Wear protective clothing such as boots, gloves, lab coat, apron, or coveralls, as appropriate, to prevent skin contact.

Eye Protection: Per eye and face protection regulations (29 CFR 1910.133), use chemical safety glasses/goggles or full face shield where dusting or splashing of solutions is possible.

Ventilation: Provide local or general exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (see below.)

Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and if necessary, wear a MSHA/NIOSH approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions. For emergency or non-routine operations (cleaning spills, reactor vessels, or storage tanks) wear a SCBA. Warning! Air purifying respirators do not protect workers in oxygen-deficient atmospheres. If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and sanitary storage.

Contaminated Clothing: Separate contaminated clothing from non-contaminated clothing. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

Engineering Controls: Not applicable

OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH
TWA	STEL	TWA	STEL	TWA	STEL	IDLH (Inhalation)
Not listed	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

9. Physical and Chemical Properties

Physical State: Liquid
Color: Light green
Odor: Cinnamon
Solubility: Soluble in water at all concentrations
Specific Gravity (at 70° F): 1.005
Density (lbs/gal): 8.38
pH : ca. 5.5
Boiling Point: ca. 212° F
Melting Point: ca. -2° F
Vapor Density (Air=1): No information found
Vapor Pressure (mmHg): No information found
Evaporation Rate (BuAc=1): No information found

10. Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.
Hazardous Decomposition Products: Oxides of nitrogen, carbon, phosphorus.
Polymerization: No hazardous polymerization will occur.
Incompatibilities: Nitrosating agents.
Conditions to Avoid: Heat, flames, ignition sources, and incompatibles.

11. Toxicological Information

Zyme-HT® Z11:

- **LD₅₀, Oral, Rat:** ND ^{mg}/_{kg}
- **LC₅₀, Inhalation, Rat:** ND ^{ug}/_{m³}
- **Irritation, Eye, Rabbit (500^{mg}/_{24H}):** Mild
- **NTP Carcinogen:**
 - **Known:** No
 - **Anticipated:** No
- **IARC Category:** None

12. Ecological Information

Zyme-HT® Z11:

- **Environmental Fate:** Biodegradable.
- **Aquatic Toxicity:**
 - **LC₅₀ 96 hour, Rainbow Trout (juvenile):** ND ^{mg}/_L
 - **LC₅₀ 96 hour, Sheepshead Minnow:** ND ^{mg}/_L
 - **NOEC 96 hour:** ND ^{mg}/_L
 - **LC₅₀ 48 hour, Americamysis bahia:** ND ^{mg}/_L
 - **NOEC 48 hour:** ND ^{mg}/_L

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use, or contamination of this product may change the waste management options. Always dispose of in accordance with local, state, and federal regulations. Recommend puncturing or crushing of containers to prevent unauthorized use of used containers.

14. Transport Information

Domestic (Land, D.O.T.): Not restricted.

International (Water, I.M.O.): Not restricted.

15. Regulatory Information

Chemical Inventory Status – Section 1				
Ingredient	TSCA	EC	Japan	Australia
Zyme-HT® Z11	Yes	Yes	Yes	Yes

Chemical Inventory Status – Section 2				
Ingredient	Korea	Canada DSL	Canada NDSL	Phil.
Zyme-HT® Z11	Yes	Yes	No	Yes

Federal, State & International Regulations – Section 1				
Ingredient	SARA 302		SARA 313	
	RQ	TPQ	List	Chem. Catg.
Zyme-HT® Z11	No	No	No	No

Federal, State & International Regulations – Section 2				
Ingredient	CERCLA	RCRA	TSCA	
		261.33	8(d)	12(b)
Zyme-HT® Z11	No	No	No	No

SARA 311/312

Fire: No

Acute: Yes

Chronic: No

Pressure: No

Reactivity: No

Chemical Weapons Convention: No

State: Liquid

CDTA: No

Poison Schedule: -

Australian HazChem Code: -

WHMIS: This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulations/WHMIS) and the MSDS contains all the information required by the CPR.

Markings according to EU/ECC guidelines: Not subject to EC directive label requirements.

Code letter and hazard designation: None, this product and components comply with EINECS.

Germany Water Endangering Classes (WGK): 1

Risk Phrases: R36/38: Irritating to eyes, skin.

Safety Phrases: S24/25: Avoid contact with skin, eyes.

S37/39: Wear suitable gloves and eye/face protection.

16. Other Information

United Laboratories International, LLC provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. UNITED LABORATORIES INTERNATIONAL, LLC MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, UNITED LABORATORIES INTERNATIONAL, LLC WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.