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Version 3

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****Product Name** MICRO-ZYME L-300**Other means of identification****Product Code** 173  
**Synonyms** None**Recommended use of the chemical and restrictions on use****Recommended Use** Liquid enzyme concentrate.  
**Uses advised against** No information available**Manufacturer Address**

Anderson Chemical Company, 325 South Davis Avenue, Litchfield, MN 55355 (320-693-2477)

**Emergency telephone number**

Chemtrec 1-800-424-9300

**2. HAZARDS IDENTIFICATION****Classification**

Respiratory sensitization Category 1

**Label elements****Emergency Overview****Danger****Hazard statements**

May cause allergy or asthma symptoms or breathing difficulties if inhaled

**Appearance** aqueous solution**Physical state** liquid**Odor** Solvent**Precautionary Statements - Prevention**Avoid breathing dust/fume/gas/mist/vapors/spray  
In case of inadequate ventilation wear respiratory protection**Precautionary Statements - Response**IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing  
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)****Other Information**

May cause sensitization by skin contact 0.05% of the mixture consists of ingredient(s) of unknown toxicity

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Subtilisins (proteolytic enzymes)	9014-01-1	1 - 5	

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

### 4. FIRST AID MEASURES

#### First aid measures

<b>Eye contact</b>	Flush immediately with plenty of water for 15 minutes. Lift upper and lower eyelids for complete rinsing. If irritation persists after rinsing, get medical attention.
<b>Skin Contact</b>	Flush with water for 15 minutes. If irritation persists after rinsing, get medical attention. Remove contaminated clothing and wash before reuse.
<b>Inhalation</b>	Remove victim to fresh air. If breathing difficulty occurs or persists, get medical attention.
<b>Ingestion</b>	Rinse mouth with water. Give water to dilute. Do not induce vomiting. Get immediate medical attention. Never give anything by mouth to a semi-comatose, comatose, convulsing or unconscious person.

#### Most important symptoms and effects, both acute and delayed

<b>Symptoms</b>	May cause eye irritation. Could cause mild skin irritation after prolonged contact. Inhalation could cause irritation to respiratory tract. Ingestion may result in gastrointestinal irritation, nausea, vomiting, and diarrhea. May cause an allergic respiratory reaction in sensitive individuals.
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#### Indication of any immediate medical attention and special treatment needed

<b>Note to physicians</b>	Treat symptomatically.
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### 5. FIRE-FIGHTING MEASURES

#### Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** Caution: Use of water spray when fighting fire may be inefficient.

#### Specific hazards arising from the chemical

No information available.

#### Explosion data

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

#### Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Use water spray to cool fire exposed containers.

### 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions, protective equipment and emergency procedures

<b>Personal precautions</b>	Evacuate nonessential personnel. Ventilate area. Wear appropriate personal protection equipment. Avoid creating dust.
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<b>Environmental precautions</b>	See Section 12 for additional ecological information.
<b>Methods for containment</b>	Completely contain spilled material with dikes or sand bags, etc.
<b>Methods for cleaning up</b>	Shut off source of leak only if safe to do so. Dike and contain spilled material. Recover free product. To clean up residue, flush area with water or use an absorbent.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

<b>Advice on safe handling</b>	Do not get in eyes, on skin, or clothing. Do not breathe vapors or mists. Do not ingest. Wash thoroughly after handling. Wear protective clothing/equipment. Use with adequate ventilation.
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### Conditions for safe storage, including any incompatibilities

<b>Storage Conditions</b>	Keep containers tightly closed and properly labeled. Containers that have been emptied will retain product residue and should be handled as if they were full. Store in a cool, dry, well-ventilated place away from incompatible materials. Wash hands before eating, drinking, using tobacco, applying make-up or using the toilet. Do not store, use, and/or consume foods, beverages, tobacco in areas where this product is stored.
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<b>Incompatible materials</b>	Strong oxidizing agents. Strong acids.
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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### **Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Subtilisins (proteolytic enzymes) 9014-01-1	Ceiling: 0.00006 mg/m <sup>3</sup> as crystalline active enzyme	(vacated) STEL: 0.00006 mg/m <sup>3</sup> 60 min	STEL: 0.00006 mg/m <sup>3</sup> 60 min Subtilisins

#### **Appropriate engineering controls**

Showers  
Eyewash stations  
Ventilation systems.

#### **Individual protection measures, such as personal protective equipment**

<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin and body protection</b>	If contact is anticipated, wear protective clothing appropriate to use conditions.
<b>Respiratory protection</b>	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

<b>General Hygiene Considerations</b>	Handle in accordance with good industrial hygiene and safety practice.
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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical state</b>	liquid	<b>Odor</b>	Solvent
<b>Appearance</b>	aqueous solution	<b>Odor threshold</b>	No information available
<b>Color</b>	clear Pale amber		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	7.0-7.5	
Melting point/freezing point	No information available	
Boiling point / boiling range	No information available	
Flash point	No information available	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific Gravity	1.019 - 1.39	
Water solubility	Soluble in water	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	
<b><u>Other Information</u></b>		
Softening point	No information available	
Molecular weight	No information available	
VOC Content (%)	No information available	
Density	No information available	
Bulk density	No information available	

## 10. STABILITY AND REACTIVITY

### **Reactivity**

No data available

### **Chemical stability**

Stable under recommended storage conditions.

### **Possibility of Hazardous Reactions**

None under normal processing.

### **Conditions to avoid**

Extremes of temperature and direct sunlight.

### **Incompatible materials**

Strong oxidizing agents. Strong acids.

### **Hazardous Decomposition Products**

Carbon oxides. Nitrogen oxides (NOx). Oxides of sulfur.

## 11. TOXICOLOGICAL INFORMATION

### **Information on likely routes of exposure**

#### **Product Information**

No data available

#### **Inhalation**

May cause irritation of respiratory tract. Shortness of breath, wheezing and coughing.

#### **Eye contact**

Irritating to eyes.

<b>Skin Contact</b>	Prolonged contact may cause redness and irritation. May cause sensitization by skin contact.
<b>Ingestion</b>	Ingestion may cause stomach irritation with stomach discomfort.

**Information on toxicological effects**

**Symptoms** No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Sensitization</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	No information available.
<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	No information available.

**Numerical measures of toxicity - Product Information**

**Unknown Acute Toxicity** 0.05% of the mixture consists of ingredient(s) of unknown toxicity  
The following values are calculated based on chapter 3.1 of the GHS document .

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

6.6% of the mixture consists of components(s) of unknown hazards to the aquatic environment

**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

**Other adverse effects**

No information available

## 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods**

<b>Disposal of wastes</b>	Disposal should be in accordance with applicable regional, national and local laws and regulations.
<b>Contaminated packaging</b>	Do not reuse container.

## 14. TRANSPORT INFORMATION

**DOT** Not regulated

## 15. REGULATORY INFORMATION

### International Inventories

<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>EINECS/ELINCS</b>	Complies
<b>ENCS</b>	Does not comply
<b>IECSC</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	Complies
<b>AICS</b>	Complies

### Legend:

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

### US Federal Regulations

#### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

#### **SARA 311/312 Hazard Categories**

Respiratory sensitization

#### **CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

#### **CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

### US State Regulations

#### **California Proposition 65**

**WARNING:** This product can expose you to Diethanolamine, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

#### **California Proposition 65 - CRT: Listed date/Carcinogenic substance**

Diethanolamine (CAS 111-42-2)

Listed: June 22, 2012

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

#### **U.S. State Right-to-Know Regulations**

#### **U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not Applicable

**16. OTHER INFORMATION**

<u>NFPA</u>	Health hazards 1	Flammability 0	Instability 0	Physical and Chemical Properties -
<u>HMIS</u>	Health hazards 1	Flammability 0	Physical hazards 0	Personal protection X

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Revision Note  
Review and update  
Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**