

Liquid Enzyme Boost

SAFETY DATA SHEET

Preparation Date: 01-Aug-2008

Revision Date: 26-May-2015

Revision Number: 2

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Name Liquid Enzyme Boost

Other means of identification

Item#: 1937

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use Enzyme-based additive for removal of proteinaceous soils from membrane filtration units, Restricted to professional users

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier DeLaval Cleaning Solutions
11100 N. Congress Ave.
Kansas City, MO 64153

Tel: 816-891-7700, 8am – 5pm M-F

Emergency Telephone Number

Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 2A
Respiratory Sensitization	Category 1

Label Elements

Emergency Overview

DANGER

Hazard Statements

Causes serious eye irritation

May cause allergy or asthma symptoms or breathing difficulties if inhaled



Appearance Light yellow

Physical state Liquid

Odor No information available

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Wear protective gloves/protective clothing/eye protection/face protection
 Avoid breathing dust/fume/gas/mist/vapors/spray
 In case of inadequate ventilation wear respiratory protection

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If eye irritation persists: Get medical advice/attention
 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**

Unknown Acute Toxicity 0% 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	0 - 10%	*

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

4. FIRST AID MEASURES**FIRST AID MEASURES**

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, get medical advice/attention.

Skin contact Wash off immediately with plenty of water. If skin irritation persists, call a physician.

Inhalation Move to fresh air. Get medical attention if symptoms occur.

Ingestion Do not induce vomiting. Drink 1 or 2 glasses of water. Call a physician or Poison Control Centre immediately. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects According to our experience and to the information provided to us, the product does not have any harmful effects if it is used and handled as specified.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

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

Unsuitable Extinguishing Media

No information available.

Specific hazards arising from the chemical

No information available.

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Avoid contact with the skin and the eyes.

Environmental Precautions

Prevent further leakage or spillage if safe to do so.

Methods and material for containment and cleaning up

Soak up with inert absorbent material.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin and eyes.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible Materials strong oxidizing agents, strong acids, strong bases

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Keep out of the reach of children

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Subtilisins (proteolytic enzymes) 9014-01-1	Ceiling: 0.00006 mg/m ³	STEL: 0.00006 mg/m ³	

Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

- Eye/face Protection** Goggles.
- Skin and body protection** Wear protective gloves and protective clothing.
- Respiratory Protection** 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.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid	Odor	No information available
Appearance	Light yellow	Odor Threshold	No information available
Color	No information available		

<u>Property</u>	<u>Values</u>	<u>Remarks/ Method</u>
pH	5	
Melting point/freezing point	No information available	
Boiling Point/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	1.03	
Water Solubility	soluble	
Solubility in other solvents	No information available	
Partition coefficient: n-octanol/water	No information available	
Autoignition Temperature	No information available	
Decomposition temperature	No information available	
Viscosity of Product	No information available	
Dynamic viscosity	No information available	
Explosive Properties	No information available	
Oxidizing Properties	No information available	

Other information

Softening Point	No information available
Molecular Weight	No information available
VOC Content	No information available
Density	8.6 lb/gal
Bulk Density	No information available

10. STABILITY AND REACTIVITY**Reactivity**

No data available

Chemical Stability

Stable under normal conditions.

Possibility of hazardous reactions

None known.

Conditions to Avoid

Extremes of temperature and direct sunlight.

Incompatible Materials

strong oxidizing agents, strong acids, strong bases

Hazardous decomposition products

None known.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation	No data available.
Eye contact	No data available.
Skin contact	No data available.
Ingestion	No data available.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Subtilisins (proteolytic enzymes) 9014-01-1	= 3700 mg/kg (Rat)	> 2 ml/kg (rabbit)	-

Information on toxicological effects

Symptoms No information available.

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

Sensitization No information available.

Mutagenic effects No information available.

Carcinogenicity No information available.

Reproductive Effects No information available.

STOT - single exposure No information available.

STOT-repeated exposure No information available.

Aspiration Hazard No information available.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity 0% 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

1.7% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Microtox	Waterflea
Subtilisins (proteolytic enzymes) 9014-01-1	-	LC50 = 16 mg/l	-	-

Persistence and degradability

No information available.

Bioaccumulation/Accumulation

No information available.

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Method Dispose of in accordance with local regulations. Should not be released into the environment.

Contaminated Packaging Empty containers should be taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION

DOT Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	TSCA
DSL/NDSL	DSL/NDSL
EINECS/ELINCS	Complies
ENCS	Does not Comply
CHINA	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
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

State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. EPA Label information

EPA Pesticide registration number Not applicable

16. OTHER INFORMATION

NFPA Health 1 Flammability 0 Instability 0 Physical Hazard -

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Revision Note

No information available

Disclaimer

The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of SDS