

# Material Safety Data Sheet



## ASEPTI-ZYME MULTI ENZYMATIC DETERGENT

### Section 1. Chemical product and company identification

**Trade name** : ASEPTI-ZYME MULTI ENZYMATIC DETERGENT  
**Product use** : Instrument cleaner  
**Supplier** : Ecolab Healthcare Division  
370 Wabasha Street N  
St. Paul MN 55102  
5105 Tomken Road  
Mississauga ON L4W 2X5  
1-800-352-5326  
**Code** : 911734  
**Date of issue** : 30-June-2005

**EMERGENCY HEALTH INFORMATION: 1-800-328-0026**  
**Outside United States and Canada CALL 1-651-222-5352 (in USA)**

### Section 2. Composition, Information on Ingredients

<u>Name</u>	<u>CAS number</u>	<u>% by weight</u>
propylene glycol	57-55-6	30 - 60
triethanolamine	102-71-6	3 - 7
boric acid	10043-35-3	1 - 5
alcohols, c12-14-secondary, ethoxylated	84133-50-6	1 - 5
subtilisin	9014-01-1	0.1 - 1
lipase, triacylglycerol	9001-62-1	0.1 - 1
a-amylase	9000-90-2	0.1 - 1

### Section 3. Hazards identification

**Physical state** : Liquid. (Liquid.)  
**Emergency overview** : CAUTION!  
MAY CAUSE ALLERGIC RESPIRATORY AND SKIN REACTION.  
MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION.  
Avoid contact with skin and clothing. Do not breathe vapour or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.  
**Routes of entry** : Skin contact, Eye contact, Inhalation, Ingestion  
**Potential acute health effects**  
**Eyes** : Moderately irritating to eyes.  
**Skin** : Moderately irritating to the skin. May cause sensitisation by skin contact.  
**Inhalation** : Moderately irritating to the respiratory system. May cause sensitisation by inhalation.  
**Ingestion** : No known significant effects or critical hazards.

See toxicological Information (section 11)

### Section 4. First aid measures

**Eye contact** : In case of contact, immediately flush eyes with cool running water. Remove contact lenses and continue flushing with plenty of water for at least 15 minutes. Get medical attention if irritation persists.  
**Skin Contact** : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Obtain medical attention.  
**Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical attention.  
**Ingestion** : Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately.

## Section 5. Fire fighting measures

<b>Auto-ignition temperature</b>	: Not available.
<b>Flash point</b>	: > 100°C Product does not support combustion.
<b>Flammable limits</b>	
<b>Upper:</b>	Not available.
<b>Lower:</b>	Not available.
<b>Products of combustion</b>	: Not available.
<b>Fire-fighting media and instructions</b>	: Use an extinguishing agent suitable for surrounding fires.  Dike area of fire to prevent product run-off. No specific hazard.
<b>Special protective equipment for fire-fighters</b>	: Fire fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Risks of explosion of the product in presence of mechanical impact: Not available.	
Risks of explosion of the product in presence of static discharge: Not available.	

## Section 6. Accidental release measures

<b>Personal Precautions</b>	: Ventilate area of leak or spill. Do not touch damaged containers or spilled material unless wearing appropriate protective equipment (Section 8). Stop leak if without risk. Prevent entry into sewers, water courses, basements or confined areas.
<b>Environmental precautions</b>	: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
<b>Methods for cleaning up</b>	: If emergency personnel are unavailable, contain spilled material. For small spills add absorbent (soil may be used in the absence of other suitable materials) scoop up material and place in a sealed, liquid-proof container for disposal. For large spills dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.--

## Section 7. Handling and storage

<b>Handling</b>	: Do not ingest. Avoid contact with eyes, skin and clothing. Keep container closed. Use only with adequate ventilation. Do not breathe vapour or mist. Wash thoroughly after handling.
<b>Storage</b>	: Keep out of the reach of children. Keep container tightly closed. Keep container in a cool, well-ventilated area. Store between 15 and 30°C

## Section 8. Exposure Controls, Personal Protection

<b>Engineering controls</b>	: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective occupational exposure limits.
<b>Personal protection</b>	
<b>Eyes</b>	: Eye protection recommended.
<b>Hands</b>	: Use chemical resistant, impervious gloves.
<b>Skin</b>	: No protective equipment is needed under normal use conditions.
<b>Respiratory</b>	: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
<b>Name</b>	<b>Exposure limits</b>
triethanolamine	<b>ACGIH TLV (United States, 1/2004).</b> TWA: 5 mg/m <sup>3</sup> 8 hour(s). Form: All forms
subtilisin	<b>ACGIH TLV (United States, 1/2004). Notes: Based on "high-volume" sampling.</b> CEIL: 0.00006 mg/m <sup>3</sup> Form: All forms

## Section 9. Physical and chemical properties

Physical state	: Liquid. (Liquid.)
Colour	: Purple.
Odour	: Sweetish.
pH	: 7 (100%)
Boiling/condensation point	: 100 °C
Melting/freezing point	: Not available.
Specific gravity	: 1.06 (Water = 1)
Vapour pressure	: Not applicable.
Vapour density	: Not available.
Odour threshold	: Not available.
Evaporation rate	: Not available.
LogK <sub>ow</sub>	: Not available.
Dispersion properties	: Easily dispersed in cold water, hot water.
Solubility	: Easily soluble in cold water, hot water.

## Section 10. Stability and reactivity

Stability	: The product is stable.
Conditions of instability	: Not available.
Incompatibility with various substances	: Not available.
Hazardous Decomposition	: Not available.
Products	

## Section 11. Toxicological information

### Potential acute health effects

Eyes	: Moderately irritating to eyes.
Skin	: Moderately irritating to the skin. May cause sensitisation by skin contact.
Inhalation	: Moderately irritating to the respiratory system. May cause sensitisation by inhalation.
Ingestion	: No known significant effects or critical hazards.
Irritancy of Product	: Hazardous by WHMIS criteria.

### Potential chronic health effects

Carcinogenic effects	: No known significant effects or critical hazards.
Mutagenic effects	: No known significant effects or critical hazards.
Teratogenic effects	: No known significant effects or critical hazards.
Reproductive effects	: Hazardous by WHMIS criteria.
Sensitization to Product	: May cause sensitisation by inhalation and skin contact.
Synergistic Products (Toxicologically)	: Not available.

### Toxicity data

<u>Ingredient name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
propylene glycol	LD50	18500 mg/kg	Oral	Rabbit
	LD50	>2080 mg/kg	Oral	quail
	LD50	18350 mg/kg	Oral	Guinea pig
	LD50	20800 mg/kg	Dermal	Rabbit
triethanolamine	LD50	2200 mg/kg	Oral	Rabbit
	LD50	2200 mg/kg	Oral	Guinea pig
	LD50	5846 mg/kg	Oral	Mouse
	LDLo	200 mg/kg	Oral	woman
boric acid	LDLo	429 mg/kg	Oral	man
	LDLo	934 mg/kg	Oral	infant
	LDLo	1200 mg/kg	Dermal	infant
	LDLo	1500 mg/kg	Dermal	child
	LDLo	2430 mg/kg	Dermal	man
	LDLo	2430 mg/kg	Dermal	man
subtilisin	LD50	3700 mg/kg	Oral	Rat

Target organs : Not available.

## Section 12. Ecological information

### Ecotoxicity data

<u>Ingredient name</u>	<u>Species</u>	<u>Period</u>	<u>Result</u>
propylene glycol	Daphnia magna (EC50)	48 hour(s)	>10000 mg/l
	Pimephales promelas (LC50)	96 hour(s)	710 mg/l
	Pimephales promelas (LC50)	96 hour(s)	55770 mg/l
triethanolamine	Pimephales promelas (LC50)	96 hour(s)	>62000 mg/l
	Scenedesmus subspicatus (EC50)	48 hour(s)	470 mg/l
	Scenedesmus subspicatus (EC50)	48 hour(s)	750 mg/l
boric acid	Pimephales promelas (LC50)	96 hour(s)	11800 mg/l
	Daphnia magna (EC50)	48 hour(s)	133 mg/l
	Daphnia magna (EC50)	48 hour(s)	226 mg/l
	Daphnia magna (EC50)	48 hour(s)	777 mg/l
	Oncorhynchus mykiss (LC50)	96 hour(s)	>800 mg/l
	Lepomis macrochirus (LC50)	96 hour(s)	>1021 mg/l
	Oncorhynchus mykiss (LC50)	96 hour(s)	>1100 mg/l

**Products of degradation** : These products are carbon oxides (CO, CO<sub>2</sub>) and water, nitrogen oxides (NO, NO<sub>2</sub> ...). Some metallic oxides.

## Section 13. Disposal considerations

**Waste disposal** : The generation of waste should be avoided or minimised wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

**Consult your local or regional authorities.**

## Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Additional Information
<b>TDG</b> Classification	Not regulated.	-	-	-	-

### APPLIES ONLY DURING ROAD TRANSPORT

Any variation of the shipping description based on the packaging is not addressed.

## Section 15. Regulatory information

**WHMIS** : Class D-2A: Material causing other toxic effects (VERY TOXIC).  
Class D-2B: Material causing other toxic effects (TOXIC).

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*.

## Section 16. Other information

**Date of issue** : 30-June-2005.  
**Responsible name** : Regulatory Affairs  
**Date of previous issue** : No Previous Validation.

### Notice to reader

The above information is believed to be correct with respect to the formula used to manufacture the product in the country of origin. As data, standards, and regulations change, and conditions of use and handling are beyond our control, NO WARRANTY, EXPRESS OR IMPLIED, IS MADE AS TO THE COMPLETENESS OR CONTINUING ACCURACY OF THIS INFORMATION.