



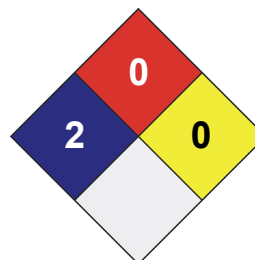
MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product name Enzymax Spray Gel
CAS # Mixture
Product use Enzyme cleaner
Manufacturer information Hu-Friedy Mfg. Co., LLC
3232 N. Rockwell
Chicago, IL 60618-5982 US
Phone: 773.975.6100
Fax: 773.868.3599
Emergency Phone: 1-800-535-5053
Outside US: 001-352-323-3500

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	* 2
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X



2. Hazards Identification

Emergency overview WARNING
MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN IRRITATION.
Contains a potential reproductive toxin.

Potential short term health effects

Routes of exposure Eye, Skin contact, Inhalation, Ingestion.

Eyes May cause irritation.

Skin May cause irritation.

Inhalation May cause respiratory tract irritation.

Ingestion May cause stomach distress, nausea or vomiting.

Target organs Eyes. Skin.

Chronic effects Prolonged or repeated exposure can cause drying, defatting and dermatitis.

Signs and symptoms Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

OSHA regulatory status This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential environmental effects See section 12.

3. Composition/Information on Ingredients

Components	CAS #	Percent
1,2-Propylene glycol	57-55-6	7 - 13
Sodium tetraborate	1303-96-4	1 - 5
Capryloamidopropyl betaine	73772-46-0	0.5 - 1.5

4. First Aid Measures

First aid procedures

Eye contact Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.

Skin contact Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.

Inhalation	If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.
Ingestion	Do not induce vomiting. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.
Notes to physician	Symptoms may be delayed.
General advice	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire Fighting Measures

Flammable properties	Not flammable by WHMIS/OSHA criteria.
Extinguishing media	
Suitable extinguishing media	Treat for surrounding material.
Unsuitable extinguishing media	Not available
Protection of firefighters	
Specific hazards arising from the chemical	Not available
Protective equipment and precautions for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Hazardous combustion products	May include and are not limited to: Oxides of carbon. Oxides of nitrogen.
Explosion data	
Sensitivity to mechanical impact	Not available.
Sensitivity to static discharge	Not available.

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
Environmental precautions	Do not discharge into lakes, streams, ponds or public waters.
Methods for containment	Stop leak if you can do so without risk. Use water spray to reduce vapors or divert vapor cloud drift. Prevent entry into waterways, sewers, basements or confined areas.
Methods for cleaning up	Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills to original containers for re-use.

7. Handling and Storage

Handling	Use good industrial hygiene practices in handling this material. Avoid contact with eyes and skin. Wash thoroughly after handling.
Storage	Keep out of reach of children. Store in a closed container away from incompatible materials.

8. Exposure Controls/Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values Components

Components	Type	Value	Form
Sodium Tetraborate (CAS 1303-96-4)	STEL	6 mg/m3	Inhalable fraction.
	TWA	2 mg/m3	Inhalable fraction.

Exposure limits	See above
Engineering controls	General ventilation normally adequate.

Personal protective equipment

Eye / face protection	Wear safety glasses with side shields.
Hand protection	Rubber gloves. Confirm with a reputable supplier first.
Skin and body protection	As required by employer code.
Respiratory protection	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

9. Physical and Chemical Properties

Appearance	Clear gel
Color	Colorless
Form	Spray
Odor	Fresh.
Odor threshold	Not available.
Physical state	Liquid.
pH	8 - 9
Freezing point	Not available.
Boiling point	Not available
Pour point	Not available.
Evaporation rate	Not available
Flash point	Not available
Auto-ignition temperature	Not available
Flammability limits in air, upper, % by volume	Not available
Flammability limits in air, lower, % by volume	Not available
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	1 - 1.2
Partition coefficient (n-octanol/water)	Not available
Solubility (water)	Complete
Relative density	Not available.
Viscosity	Not available.
VOC	Not available
Percent volatile	Not available

10. Stability and Reactivity

Reactivity	None known.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Do not mix with other chemicals.
Incompatible materials	Caustics. Acids. Oxidizers.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon. Oxides of nitrogen.

11. Toxicological Information

Toxicological data

Components	Species	Test Results
1,2-Propylene glycol (CAS 57-55-6)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	20800 mg/kg
<i>Oral</i>		
LD50	Dog	19000 mg/kg
	Guinea pig	18400 mg/kg
	Mouse	23900 mg/kg
	Rabbit	14800 mg/kg
	Rat	20000 mg/kg

LC50

Not available.

Capryloamidopropyl betaine (CAS 73772-46-0)

LD50*Oral*

Not available.

Sodium tetraborate (CAS 1303-96-4)

Acute*Dermal*

LD50 Rabbit 10000 mg/kg

Oral

LD50 Guinea pig 5330 mg/kg

Mouse 2000 mg/kg

Rat 2660 mg/kg

396 mg/kg

LC50

Not available.

Effects of acute exposure**Eye contact** May cause irritation.**Skin contact** May cause irritation.**Inhalation** May cause respiratory tract irritation.**Ingestion** May cause stomach distress, nausea or vomiting.**Sensitization** Non-hazardous by WHMIS/OSHA criteria.**Chronic effects** Non-hazardous by WHMIS/OSHA criteria.**Carcinogenicity** Non-hazardous by WHMIS/OSHA criteria.**ACGIH Carcinogens**

Sodium tetraborate (CAS 1303-96-4)

A4 Not classifiable as a human carcinogen.

Mutagenicity Non-hazardous by WHMIS/OSHA criteria.**Reproductive effects** Borates may cause harmful reproductive effects based on animal data.**Teratogenicity** Non-hazardous by WHMIS/OSHA criteria.**Name of Toxicologically Synergistic Products** Not available.

12. Ecological Information

Ecotoxicity Components of this product have been identified as having potential environmental concerns. See below

Ecotoxicological data**Components**

1,2-Propylene glycol (CAS 57-55-6)

		Species	Test Results
Crustacea	EC50	Daphnia	10000 mg/L, 48 Hours
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>)	710 mg/l, 96 hours

Aquatic

Crustacea	EC50	Water flea (<i>Daphnia magna</i>)	> 10000 mg/l, 48 hours
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Persistence and degradability Not available.**Bioaccumulation / Accumulation** Not available**Mobility in environmental media** Not available.**Environmental effects** Not available.**Aquatic toxicity** Not available.**Partition coefficient**

1,2-Propylene glycol -0.92

Chemical fate information Not available.**13. Disposal Considerations****Disposal instructions** Review federal, state/provincial, and local government requirements prior to disposal.**Waste from residues / unused products** Not available**Contaminated packaging** Not available**14. Transport Information****U.S. Department of Transportation (DOT)**

Not regulated as dangerous goods.

Transportation of Dangerous Goods (TDG - Canada)

Not regulated as dangerous goods.

15. Regulatory Information**Canadian federal regulations** 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.**Canada WHMIS Ingredient Disclosure: Threshold limits**

1,2-Propylene glycol (CAS 57-55-6)	1 %
Sodium tetraborate (CAS 1303-96-4)	1 %

WHMIS status Controlled**WHMIS classification** Class D - Division 2A, 2B**WHMIS labeling****Occupational Safety and Health Administration (OSHA)****29 CFR 1910.1200 hazardous chemical** Yes**US federal regulations** All components are on the U.S. EPA TSCA Inventory List. This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

US CAA Section 111 Volatile Organic Compounds: Listed substance

1,2-Propylene glycol (CAS 57-55-6) Listed.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Clean Water Act (CWA) Hazardous substance

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - California Hazardous Substances (Director's): Listed substance

Sodium tetraborate (CAS 1303-96-4) Listed.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

US - Minnesota Haz Subs: Listed substance

1,2-Propylene glycol (CAS 57-55-6) Listed.

Sodium tetraborate (CAS 1303-96-4) Listed.

US - New Jersey RTK - Substances: Listed substance

1,2-Propylene glycol (CAS 57-55-6) Listed.

Sodium tetraborate (CAS 1303-96-4) Listed.

US - Texas Effects Screening Levels: Listed substance

1,2-Propylene glycol (CAS 57-55-6) Listed.

Sodium tetraborate (CAS 1303-96-4) Listed.

US. Massachusetts RTK - Substance List

Sodium tetraborate (CAS 1303-96-4) Listed.

US. Pennsylvania RTK - Hazardous Substances

1,2-Propylene glycol (CAS 57-55-6) Listed.

Sodium tetraborate (CAS 1303-96-4) Listed.

US. Rhode Island RTK

Not regulated.

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

Disclaimer

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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Other information

For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.

This MSDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.