



How the best perform

Enzymax RTU Liquid Ultrasonic Detergent and Presoak

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2024 and the Hazardous Products Regulations (HPR) WHMIS 2022
Issue date: 2026-08-06 Revision date: 2026-08-06 Supersedes: 2022-03-11 Version: 3.0

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : Enzymax RTU Liquid Ultrasonic Detergent and Presoak
Product code : IMS-1226

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use : Detergent

1.4. Supplier's details

Manufacturer

Hu-Friedy Mfg. Co., LLC
2501 Sanders Rd.
Northbrook, IL 60062 USA
T 1-800-483-7433

1.5. Emergency phone number

Emergency number : 1-800-535-5053

SECTION 2 Hazard identification

2.1. Classification of the substance or mixture

GHS classification

Respiratory sensitization, Category 1

2.2. Label elements

GHS labelling

Hazard pictograms (GHS)



Signal word (GHS)

: Danger

Hazard statements (GHS)

: May cause allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary statements (GHS)

: Avoid breathing dust, fume, gas, mist, vapours, spray.

Wear respiratory protection.

If inhaled: Remove person to fresh air and keep comfortable for breathing.

If experiencing respiratory symptoms: Call a poison center or doctor.

Dispose of a hazardous or special waste collection point to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

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2.4. Hazards not otherwise classified

Other hazards which do not result in classification : No additional information available.

2.5. Unknown acute toxicity

Not applicable

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Chemical name / Synonyms	Product identifier	Conc. (% w/w)Weight
Glycerin	Glycerin GLYCERIN / 1,2,3- Trihydroxypropane / Glycerol / Glycerine / Glycerin / Propane- 1,2,3-triol	CAS-No.: 56-81-5	5 – 10
Octanoic acid, potassium salt (1:1)	Octanoic acid, potassium salt (1:1) Caprylic acid, potassium salt / Potassium caprylate / Potassium octanoate / Potassium octoate / Octanoic acid, potassium salt (1:1) / POTASSIUM CAPRYLATE / potassium octanoate	CAS-No.: 764-71-6	1 – 5
Subtilisins (proteolytic enzymes)	Subtilisins (proteolytic enzymes) Subtilisin, fermentation product / Enzymes, subtilisins / Subtilisins (Proteolytic enzymes as 100% pure crystalline enzyme) / SUBTILISIN / Bacillus subtilis Carlsberg / Proteolytic enzymes / Subtilisins, as crystalline active enzyme / Subtilisins (Bacillus subtilis Carlsberg) / Subtilisins (proteolytic enzymes as 100% pure crystalline enzyme) / Subtilisins / Subtilisins (proteolytic enzymes)	CAS-No.: 9014-01-1	0.1 - 1

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

SECTION 4 First-aid measures

4.1. Description of necessary first-aid measures

- First-aid measures after inhalation : If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
- First-aid measures after skin contact : If skin irritation occurs: Wash skin with plenty of water. Obtain medical attention if irritation persists.
- First-aid measures after eye contact : 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.

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First-aid measures after ingestion : Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : May cause irritation to the respiratory tract. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Symptoms/effects after skin contact : May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

Symptoms/effects after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/effects after ingestion : May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media : Do not use water jet.

5.2. Specific hazards arising from the chemical

Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

For non-emergency personnel

No additional information available

For emergency responders

Environmental precautions : Prevent entry to sewers and public waters.

6.2. Methods and materials for containment and cleaning up

For containment : Absorb and/or contain spill with inert material (sand, vermiculite or other appropriate material), then place in suitable container. Do not flush into surface water or sewer system. Wear recommended personal protective equipment.

Methods for cleaning up : Provide ventilation. Sweep or shovel spills into appropriate container for disposal.

For further information refer to section 8: "Exposure controls/personal protection"

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SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not swallow. When using do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Handle and open container with care.
Hygiene measures	: Wash contaminated clothing before reuse. Always wash hands after handling the product.

7.2. Conditions for safe storage, including incompatibilities

Storage conditions	: Keep out of the reach of children. Store tightly closed in a dry, cool and well-ventilated place.
Specific end uses	: Detergent

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

Enzymax RTU Liquid Ultrasonic Detergent and Presoak	
No additional information available	
Glycerin (56-81-5)	
USA - OSHA - Occupational Exposure Limits	
Local name	Glycerin (mist)
OSHA PEL TWA	15 mg/m ³ (mist, total particulate) 5 mg/m ³ (mist, respirable fraction)
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
Octanoic acid, potassium salt (1:1) (764-71-6)	
No additional information available	
Subtilisins (proteolytic enzymes) (9014-01-1)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Bacillus subtilis, as 100% crystalline active pure enzyme
ACGIH® TLV® C	0.00006 mg/m ³
Remark (ACGIH)	TLV® Basis: Asthma; Skin, LRT & URT irr
Regulatory reference	ACGIH 2025
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL STEL	0.00006 mg/m ³ (Subtilisins)

8.2. Appropriate engineering controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Environmental exposure controls	: Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Hand protection:
Wear suitable gloves. Consult glove manufacturer's product information on material suitability and material thickness.

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Eye protection:
Safety glasses or goggles are recommended when using product.
Skin and body protection:
Wear suitable protective clothing
Respiratory protection:
Wear suitable respiratory equipment. 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. SDSs cannot provide detailed and complete respiratory protection guidelines. Selection of respiratory protection must be done by a qualified person who has assessed the work environment.

Other information:

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	: Liquid
Appearance	: Purple liquid.
Colour	: Purple
Odour	: Lemon spearmint.
Odour threshold	: No data available
pH	: 8.5 – 9
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Flammability (solid, gas)	: Not flammable.
Vapour pressure	: No data available
Relative vapour density at 20°C/ 68 °F	: No data available
Relative density	: 1.11
Solubility	: No data available
Partition coefficient n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Explosive limits	: No data available
Particle characteristics	: No data available

Glycerin	
Boiling point	290 °C Atm. press.: 760 mm Hg
Flash point	199 °C
Auto-ignition temperature	392.78 °C
Vapour pressure	0.0033 hPa (at 50 °C)
Particle characteristics	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

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SECTION 10 Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Heat.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified.
Acute toxicity (dermal) : Not classified.
Acute toxicity (inhalation) : Not classified.

Glycerin (56-81-5)	
LD50 oral rat	12600 mg/kg (Source: NLM_CIP)
LD50 dermal rabbit	> 10 g/kg (Source: NLM_CIP)
LC50 inhalation rat	> 2.75 mg/l/4h

Subtilisins (proteolytic enzymes) (9014-01-1)	
LD50 oral rat	1800 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 1200 - 2300
LD50 oral	370 mg/kg

Skin corrosion/irritation : Not classified.
pH: 8.5 – 9

Serious eye damage/irritation : Not classified.
pH: 8.5 – 9

Respiratory or skin sensitisation : May cause allergy or asthma symptoms or breathing difficulties if inhaled. Skin sensitization: Not classified.

Germ cell mutagenicity : Not classified.

Carcinogenicity : Not classified.

Reproductive toxicity : Not classified.

STOT-single exposure : Not classified.

Subtilisins (proteolytic enzymes) (9014-01-1)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified.

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Subtilisins (proteolytic enzymes) (9014-01-1)	
NOAEL (oral, rat, 90 days)	360 – 891 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)

Aspiration hazard : Not classified.

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Viscosity, kinematic	No data available

Glycerin (56-81-5)	
Viscosity, kinematic	No data available

Octanoic acid, potassium salt (1:1) (764-71-6)	
Viscosity, kinematic	No data available

Subtilisins (proteolytic enzymes) (9014-01-1)	
Viscosity, kinematic	No data available

Symptoms/effects after inhalation : May cause irritation to the respiratory tract. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Symptoms/effects after skin contact : May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

Symptoms/effects after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/effects after ingestion : May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Other information : Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

Hazardous to the aquatic environment, short-term (acute) : Not classified.

Hazardous to the aquatic environment, long-term (chronic) : Not classified.

Glycerin (56-81-5)	
LC50 - Fish [1]	54000 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)

Subtilisins (proteolytic enzymes) (9014-01-1)	
LC50 - Fish [1]	14.6 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	0.306 mg/l Test organisms (species): Daphnia magna
LC50 - Fish [2]	8.2 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [2]	170 µg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	0.513 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	1.48 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)

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12.2. Persistence and degradability

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Persistence and degradability	Not established.
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Glycerin (56-81-5)

Persistence and degradability	Not rapidly degradable
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Octanoic acid, potassium salt (1:1) (764-71-6)

Persistence and degradability	Rapidly degradable
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Subtilisins (proteolytic enzymes) (9014-01-1)

Persistence and degradability	Rapidly degradable
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12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.
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Glycerin (56-81-5)

BCF - Fish [1]	(no bioaccumulation)
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Partition coefficient n-octanol/water	-1.75 (at 25 °C (at pH 7.4)
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Subtilisins (proteolytic enzymes) (9014-01-1)

Partition coefficient n-octanol/water	-3.1 (at 25 °C (at pH 9.2)
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Ozone	: Not classified.
Fluorinated greenhouse gases	: No
Other information	: No other effects known.

SECTION 13 Disposal considerations

Product/Packaging disposal recommendations	: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. The generation of waste should be avoided or minimised wherever possible.
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SECTION 14 Transport information

In accordance with DOT / TDG

14.1. UN Number

Not regulated for transport

14.2. UN Proper Shipping Name

Proper Shipping Name (DOT)	: Not regulated
Proper Shipping Name (TDG)	: Not regulated

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14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : Not regulated

TDG

Transport hazard class(es) (TDG) : Not regulated

14.4. Packing group

Packing group (DOT) : Not regulated

Packing group (TDG) : Not regulated

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT

Not regulated

TDG

Not regulated

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories except for:

Subtilisins (proteolytic enzymes)	CAS-No. 9014-01-1
Amylase, α -	CAS-No. 9000-90-2

15.2. International regulations

No additional information available

15.3. State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16 Other Information

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2024 and the Hazardous Products Regulations (HPR) WHMIS 2022

Revision date : 2026-08-06

Issue date : 2026-08-06

Other information : None.

Prepared by : Nexreg Compliance Inc.

www.Nexreg.com



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Indication of changes:
SDS update.

SDS HazCom 2024 - WHMIS 2022 (Nexreg) 2025

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