



How the best perform

Enzymax Liquid Concentrated 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: 2026-08-06 Version: 3.0

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : Enzymax Liquid Concentrated Ultrasonic Detergent and Presoak
Product code : IMS-1222, IMS-1222C

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

Skin corrosion/irritation, Category 2
Serious eye damage/eye irritation, Category 2A
Respiratory sensitization, Category 1

2.2. Label elements

GHS labelling

Hazard pictograms (GHS)

:



Signal word (GHS)

:

Hazard statements (GHS)

:

Causes skin irritation

Causes serious eye irritation

May cause allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary statements (GHS)

:

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

Wash hands, forearms and face thoroughly after handling.

Wear eye protection, face protection, protective clothing, protective gloves.

Wear respiratory protection.

If on skin: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

If skin irritation occurs: Get medical advice or attention.

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If inhaled: Remove person to fresh air and keep comfortable for breathing.
If experiencing respiratory symptoms: Call a poison center or doctor.
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 or attention.
Dispose of contents and/or container 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

2.4. Hazards not otherwise classified

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
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	5 - 10
Glycerin	Glycerin GLYCERIN / 1,2,3- Trihydroxypropane / Glycerol / Glycerine / Glycerin / Propane- 1,2,3-triol	CAS-No.: 56-81-5	5 - 10
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	0.5 – 1.5

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Name	Chemical name / Synonyms	Product identifier	Conc. (% w/w)Weight
Amylase, α-	Amylase, α- .alpha.-Amylase / BAN / Pancrelipase amylase	CAS-No.: 9000-90-2	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 ON SKIN: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.
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.
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	: Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
Symptoms/effects after eye contact	: Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
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).
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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. Irritating vapours.
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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).
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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.
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For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel. Do not touch or walk on the spilled product.

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

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

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. Handle and open container with care. Use only outdoors or in a well-ventilated area.

Hygiene measures : Take off contaminated clothing and wash it before reuse. Wash hands, forearms and face thoroughly after handling.

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

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No additional information available

Octanoic acid, potassium salt (1:1) (764-71-6)

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

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

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Subtilisins (proteolytic enzymes) (9014-01-1)	
Remark (ACGIH)	TLV® Basis: Asthma; Skin, LRT & URT irr
Regulatory reference	ACGIH 2025
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL STEL	0.00006 mg/m³ (Subtilisins)
Amylase, α- (9000-90-2)	
No additional information available	

8.2. Appropriate engineering controls

Appropriate engineering controls	: Ensure good ventilation of the work station. Provide readily accessible eye wash stations and safety showers.
Environmental exposure controls	: Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Hand protection:
Wear suitable gloves resistant to chemical penetration. Consult glove manufacturer's product information on material suitability and material thickness.
Eye protection:
Wear eye/face protection
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	: 1.1
Solubility	: No data available
Partition coefficient n-octanol/water	: No data available

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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

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. Incompatible materials.

10.5. Incompatible materials

Oxidizing agents.

10.6. Hazardous decomposition products

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

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

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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
Amylase, α- (9000-90-2)	
LD50 oral rat	> 7500 mg/kg (Source: NLM_CIP)
LC50 inhalation rat	> 4.96 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)
Skin corrosion/irritation	: Causes skin irritation. pH: 8.5 – 9
Serious eye damage/irritation	: Causes serious eye irritation. 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.
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
Octanoic acid, potassium salt (1:1) (764-71-6)	
Viscosity, kinematic	No data available
Glycerin (56-81-5)	
Viscosity, kinematic	No data available
Subtilisins (proteolytic enzymes) (9014-01-1)	
Viscosity, kinematic	No data available
Amylase, α- (9000-90-2)	
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	: Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
Symptoms/effects after eye contact	: Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
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.

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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)
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Subtilisins (proteolytic enzymes) (9014-01-1)

LC50 - Fish [1]	14.6 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
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EC50 - Crustacea [1]	0.306 mg/l Test organisms (species): Daphnia magna
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LC50 - Fish [2]	8.2 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
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EC50 - Crustacea [2]	170 µg/l Test organisms (species): Daphnia magna
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EC50 72h - Algae [1]	0.513 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
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EC50 72h - Algae [2]	1.48 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
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Amylase, α- (9000-90-2)

EC50 - Crustacea [1]	2000 mg/l Test organisms (species): Daphnia magna
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EC50 - Crustacea [2]	212 mg/l Test organisms (species): Daphnia magna
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12.2. Persistence and degradability

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

Persistence and degradability	Rapidly degradable
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Glycerin (56-81-5)

Persistence and degradability	Not rapidly degradable
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Subtilisins (proteolytic enzymes) (9014-01-1)

Persistence and degradability	Rapidly degradable
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Amylase, α- (9000-90-2)

Persistence and degradability	Rapidly degradable
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12.3. Bioaccumulative potential

Enzymax Liquid Concentrate OSHA WHMIS

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

BCF - Fish [1]	(no bioaccumulation)
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Glycerin (56-81-5)

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

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.
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14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT	
Not regulated	

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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

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



Indication of changes:

SDS update.

SDS HazCom 2024 - WHMIS 2022 (Nexreg) 2025

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