

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ENZYMAX LIQUID CONCENTRATE

Revision date: 29.01.2018

Product code: 00379-0002AL

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

ENZYMAX LIQUID CONCENTRATE

Further trade names

IMS-1222

1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**Cleaning agent
Concentrate**1.3. Details of the supplier of the safety data sheet**

Company name:	Hu-Friedy Mfg. Co., LLC.	
	Zweigniederlassung Deutschland	
Street:	Kleines Öschle 8	
Place:	D-78532 Tuttlingen	
Telephone:	00800 48 37 43 39	Telefax: 00800 48 37 43 40
e-mail:	info@hu-friedy.eu	
Internet:	www.hu-friedy.eu	
Responsible Department:	Responsible for the safety data sheet: sds@gbk-ingelheim.de	
1.4. Emergency telephone number:	INTERNATIONAL: +49 - (0) 6132 - 84463, GBK GmbH (24h - 7d/w - 365d/a) NATIONAL: In England and Wales: 111, In Scotland: 111	

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Serious eye damage/eye irritation: Eye Dam. 1
Respiratory or skin sensitisation: Resp. Sens. 1
Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Causes serious eye damage.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Harmful to aquatic life with long lasting effects.

2.2. Label elements**Regulation (EC) No. 1272/2008****Hazard components for labelling**Subtilisin
Amylase, alpha**Signal word:** Danger**Pictograms:****Hazard statements**

H318 Causes serious eye damage.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

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P280	Wear protective gloves/protective clothing/eye protection/face protection.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Additional advice on labelling

The product is labeled in accordance with Regulation (EC) no. 1272/2008 (GHS).

2.3. Other hazards

According to Regulation (EC) No 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Enzymatic cleansing agent

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
9014-01-1	Subtilisin			4 - 6 %
	232-752-2	647-012-00-8	01-2119480434-38	
	Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Resp. Sens. 1, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 2; H302 H315 H318 H334 H335 H400 H411			
77-92-9	Citric acid			3 - 6 %
	201-069-1		01-2119457026-42	
	Eye Irrit. 2; H319			
9000-90-2	Amylase, alpha			1 - 2 %
	232-565-6	647-015-00-4	01-2119938627-26	
	Resp. Sens. 1; H334			

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated soaked clothing immediately. If you feel unwell, seek medical advice.

After inhalation

Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. In the event of symptoms refer for medical treatment.

After contact with skin

Wash off with soap and plenty of water.

After contact with eyes

If eye irritation persists, consult a specialist. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

After ingestion

Consult a physician. Rinse out mouth and give plenty of water to drink. Do not induce vomiting.

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4.2. Most important symptoms and effects, both acute and delayed

Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Product does not burn, fire-extinguishing activities according to surrounding.

Unsuitable extinguishing media

Full water jet.

5.2. Special hazards arising from the substance or mixture

Fire may produce: carbon monoxide and carbon dioxide

5.3. Advice for firefighters

Use breathing apparatus with independent air supply.

Additional information

Cool containers at risk with water spray jet.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

In case of vapour formation use respirator. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

6.2. Environmental precautions

Do not discharge into the drains/surface waters/ground water.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Shovel into suitable container for disposal.

6.4. Reference to other sections

Information for disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with the skin and the eyes.

Advice on protection against fire and explosion

No special protective measures against fire required.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

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

Advice on storage compatibility

Incompatible with oxidizing agents.

Further information on storage conditions

Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

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8.1. Control parameters**Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
9014-01-1	Subtilisins (Bacillus subtilis Carlsberg)	-	0.00004		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL

8.2. Exposure controls**Appropriate engineering controls**

Ensure adequate ventilation, especially in confined areas.

Protective and hygiene measures

Wash hands before breaks and immediately after handling the product. When using do not eat, drink or smoke. Take off immediately all contaminated clothing. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothes before re-use.

Eye/face protection

Eye wash bottle with pure water (EN 15154).

Tightly fitting goggles (EN 166).

Hand protection

Protective gloves (EN 374) Recommended material [type, thickness, permeation time]: butyl rubber, 0,7 mm, protective index 6, corresponding to 480 minutes of permeation time according to EN 374.

This recommendation refers exclusively to the chemical compatibility and the lab test conforming to EN 374 carried out under lab conditions.

Requirements can vary as a function of the use. Therefore it is necessary to adhere additionally to the recommendations given by the manufacturer of protective gloves.

Skin protection

Long sleeved clothing (EN 368).

Respiratory protection

No personal respiratory protective equipment normally required.

In case of vapour formation use respirator.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	Liquid - viscous
Colour:	Violet
Odour:	according to product specification
pH-Value:	8,5 - 9

Changes in the physical state

Melting point:	Not determined
Initial boiling point and boiling range:	100 - 105 °C
Sublimation point:	Not determined
Softening point:	Not determined
Flash point:	> 100 °C
Sustaining combustion:	No data available

Flammability

Solid:	Not determined
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Explosive properties

Not determined

Lower explosion limits:	Not determined
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Upper explosion limits: Not determined

Ignition temperature: Not determined

Auto-ignition temperature

Solid: Not determined

Decomposition temperature: Not determined

Oxidizing properties

Not determined

Vapour pressure: Not determined

Density (at 20 °C): 1,1 - 1,2 g/cm³Water solubility:
(at 20 °C) Completely miscible**Solubility in other solvents**

Not determined

Partition coefficient: Not determined

Viscosity / dynamic: Not determined

Viscosity / kinematic: Not determined

Flow time: Not determined

Solvent separation test: Not determined

Solvent content: Not determined

9.2. Other information

Solid content: Not determined

No data available

SECTION 10: Stability and reactivity**10.1. Reactivity**

No data available.

10.2. Chemical stability

No data available.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

To avoid thermal decomposition, do not overheat.

10.5. Incompatible materials

To avoid thermal decomposition, do not overheat.

Strong oxidizing agents.

10.6. Hazardous decomposition products

Carbon monoxide and carbon dioxide

Further information

No decomposition if stored and applied as directed.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute toxicity**

Based on available data, the classification criteria are not met.

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
9014-01-1	Subtilisin				
	oral	ATE mg/kg	500		
77-92-9	Citric acid				
	oral	LD50 mg/kg	11700	Rat	
	dermal	LD50 mg/kg	> 2000	Rat	

Irritation and corrosivity

Causes serious eye damage.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

May cause allergy or asthma symptoms or breathing difficulties if inhaled. (Subtilisin; Amylase, alpha)

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Practical experience

Observations relevant to classification

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Irritating to eyes. Prolonged skin contact may cause skin irritation. Sensitization through inhalation possible.

SECTION 12: Ecological information

12.1. Toxicity

No data available.

12.2. Persistence and degradability

Readily biodegradable.

12.3. Bioaccumulative potential

No data available.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
77-92-9	Citric acid	- 1,72

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

No data available.

Further information

Do not flush into surface water or sanitary sewer system.

Hazardous water pollutant.

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SECTION 13: Disposal considerations**13.1. Waste treatment methods****Advice on disposal**

Can be disposed of as a solid waste or burned in a suitable installation subject to local regulations.
Where possible recycling is preferred to disposal.

Waste disposal number of waste from residues/unused products

070699 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics; wastes not otherwise specified

Contaminated packaging

Empty containers should be taken for local recycling, recovery or waste disposal.
Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.
Packaging that cannot be cleaned should be disposed of like the product.
Water

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No dangerous good in sense of this transport regulation.

Other applicable information

Not applicable. No hazardous material as defined by the transport regulations.

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SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Water contaminating class (D): 2 - clearly water contaminating

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information**Changes**

Update 2018

Abbreviations and acronyms

ADR: Accord européen relatif au transport international des marchandises Dangereuses par Route (Agreement concerning the international carriage of Dangerous goods by Road)

IMDG-Code: International Maritime Code for Dangerous Goods

ICAO: International Civil Aviation Organisation (IATA: The International Air Transport Association)

GHS: Globally Harmonized System of Classification, Labelling and Packaging of Chemicals

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Eye Dam. 1; H318	Calculation method
Resp. Sens. 1; H334	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Further Information

Weitere Informationen :

Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.

The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge.

The delivery specifications are contained in the corresponding product sheet.

This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

(n.a. = not applicable; n.d. = not determined)

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)