ENZYFOAM

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Issue date: 11/17/2022 Revision date: 11/17/2022 Supersedes: 4/11/2022 Version: 1.8

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : ENZYFOAM
Product code : LIQ0077

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

REALZYME
S Pioneer BLVD, 223
Springboro, - OH 45066
United States of America
T +1 937 350 56 60 - F +1 937 350 56 60
info@realzyme.com - www.realzyme.com

1.4. Emergency telephone number

Emergency number : +1- 800 - 222 - 1222 (United States only) 011-32-70-245-245 (Canada and all other areas)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Pure Product

Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 1	H318	Causes serious eye damage

Product used at recommended concentration (1%)
Not classified as hazardous
Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger
Hazard statements (GHS US) : H315 - Causes skin irritation
H318 - Causes serious eye damage
Precautionary statements (GHS US) : P264 - Wash hands, forearms and face thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
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 or doctor.

Product used at recommended concentration (1%)
Labelling not applicable. Product not classified as hazardous

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
2-methoxymethylethoxypropanol	CAS-No.: 34590-94-8	5 - 15	Not classified
Alkyl polyglucoside C10-16	CAS-No.: 110615-47-9	5 - 15	Skin Irrit. 2, H315 Eye Dam. 1, H318
3-butoxypropan-2-ol, propylene glycol monobutyl ether	CAS-No.: 5131-66-8	1 - 5	Eye Irrit. 2, H319 Skin Irrit. 2, H315
Amines, coco alkyldimethyl, N-oxides	CAS-No.: 308062-28-4	1 - 5	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318
D-Glucopyranose, oligomers, decyl octyl glycosides	CAS-No.: 68515-73-1	1 - 5	Eye Dam. 1, H318
subtilisin	CAS-No.: 9014-01-1	0.1 - 1	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Resp. Sens. 1, H334 STOT SE 3, H335
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	CAS-No.: 55965-84-9	<0.1	Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Oral), H301 Skin Corr. 1B, H314 Skin Sens. 1, H317

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : If on skin, take off contaminated clothing. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Remove victim to fresh air. Allow affected person to breathe fresh air.

First-aid measures after skin contact : Rinse with plenty of water.

First-aid measures after eye contact : Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing.

First-aid measures after ingestion : Rinse mouth.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : Cough.
Symptoms/effects after skin contact : Repeated or prolonged skin contact may cause irritation.
Symptoms/effects after eye contact : Redness, pain. Blurred vision.
Symptoms/effects after ingestion : Abdominal pain, nausea.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : All extinguishing media allowed.
Unsuitable extinguishing media : None.

5.2. Specific hazards arising from the chemical

Fire hazard : Not combustible.
Explosion hazard : Product is not explosive.
Reactivity in case of fire : The product is stable at normal handling and storage conditions.

5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire : Wear proper protective equipment.
Firefighting instructions : Exercise caution when fighting any chemical fire.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Ensure adequate ventilation.

6.1.1. For non-emergency personnel

Protective equipment : Personal protection. See Heading 8.
Emergency procedures : Evacuate area.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. See Heading 8.
Emergency procedures : Mark the danger area. Stop leak if safe to do so.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Dike for recovery or absorb with appropriate material.
Methods for cleaning up : Dilute residue with water. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.
Other information : Spill area may be slippery.

6.4. Reference to other sections

See Heading 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container closed when not in use.

Storage temperature : 4 – 25 °C

Heat-ignition : Store away from direct sunlight or other heat sources.

Special rules on packaging : Keep only in original container.

Packaging materials : PEHD.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ENZYFOAM

No additional information available

2-methoxymethylethoxypropanol (34590-94-8)

USA - ACGIH - Occupational Exposure Limits

ACGIH OEL TWA	308 mg/m³
ACGIH OEL TWA [ppm]	50 ppm

Alkyl polyglucoside C10-16 (110615-47-9)

No additional information available

Amines, coco alkyldimethyl, N-oxides (308062-28-4)

No additional information available

D-Glucopyranose, oligomers, decyl octyl glycosides (68515-73-1)

No additional information available

3-butoxypropan-2-ol, propylene glycol monobutyl ether (5131-66-8)

No additional information available

subtilisin (9014-01-1)

USA - NIOSH - Occupational Exposure Limits

NIOSH REL STEL	0.00006 mg/m³ 60 minutes average value

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) (55965-84-9)

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure adequate ventilation.

Environmental exposure controls : Prevent entry to sewers and public waters. Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:
Safety glasses. Mist formation: aerosol mask with filter type P3. Gloves.

Materials for protective clothing:
Use chemically protective clothing.

Hand protection:
In case of repeated or prolonged contact wear gloves. (EN 374)

Eye protection:
Chemical goggles or safety glasses. Eye protection (standard EN 166)

Skin and body protection:
Use chemically protective clothing

Respiratory protection:
Approved dust or mist respirator (acc. to EN 140 or EN 136) should be used if airborne particles are generated when handling this material. Recommended Filter: type P3 (acc. to EN 143). The entrepreneur has to ensur that maintenance cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

Personal protective equipment symbol(s):

Thermal hazard protection:
Not applicable.

Other information:
Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. The equipment must be cleaned thoroughly after each use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Color	:	light brown
Odor	:	characteristic
Odor threshold	:	Not determined
pH	:	6.9 – 8.9
Melting point	:	The product has not been tested
Freezing point	:	The product has not been tested
Boiling point	:	The product has not been tested
Flash point	:	The product has not been tested
Relative evaporation rate (butyl acetate=1)	:	The product has not been tested
Flammability (solid, gas)	:	Not applicable
Vapor pressure	:	The product has not been tested
Relative vapor density at 20°C	:	The product has not been tested
Relative density	:	0.995 – 1.095
Solubility	:	Material highly soluble in water.
Partition coefficient n-octanol/water (Log Pow)	:	The product has not been tested
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	Not applicable

Viscosity, kinematic : The product has not been tested
Viscosity, dynamic : The product has not been tested
Explosion limits : No data available
Explosive properties : Not applicable.
Oxidizing properties : Not applicable.

9.2. Other information

Additional information : None

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under use and storage conditions as recommended in section 7.

10.2. Chemical stability

Stable under use and storage conditions as recommended in section 7.

10.3. Possibility of hazardous reactions

None under normal conditions.

10.4. Conditions to avoid

None.

10.5. Incompatible materials

None under normal conditions.

10.6. Hazardous decomposition products

None under normal conditions.

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

2-methoxymethylethoxypropanol (34590-94-8)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 10000 mg/kg

Alkyl polyglucoside C10-16 (110615-47-9)	
LD50 oral	> 2000 mg/kg

Amines, coco alkyldimethyl, N-oxides (308062-28-4)	
ATE US (oral)	500 mg/kg body weight

D-Glucopyranose, oligomers, decyl octyl glycosides (68515-73-1)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 5000 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	50 mg/l/4h

3-butoxypropan-2-ol, propylene glycol monobutyl ether (5131-66-8)	
LD50 oral rat	3300 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 2800 - 4500
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal rabbit	> 2000 mg/kg
LC50 Inhalation - Rat	651 mg/l/4h
ATE US (oral)	3300 mg/kg body weight
ATE US (vapors)	651 mg/l/4h
ATE US (dust, mist)	651 mg/l/4h

subtilisin (9014-01-1)	
LD50 oral	1800 mg/kg body weight
ATE US (oral)	500 mg/kg body weight

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) (55965-84-9)	
ATE US (oral)	100 mg/kg body weight
ATE US (dermal)	300 mg/kg body weight
ATE US (gases)	700 ppmV/4h
ATE US (vapors)	3 mg/l/4h
ATE US (dust, mist)	0.5 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.
pH: 6.9 – 8.9

Serious eye damage/irritation : Causes serious eye damage.
pH: 6.9 – 8.9

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

subtilisin (9014-01-1)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified

3-butoxypropan-2-ol, propylene glycol monobutyl ether (5131-66-8)	
LOAEL (oral,rat,90 days)	1000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents), Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (oral,rat,90 days)	350 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents), Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (dermal,rat/rabbit,90 days)	880 mg/kg body weight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)

Aspiration hazard : Not classified

Viscosity, kinematic : The product has not been tested

Symptoms/effects after inhalation : Cough.

Symptoms/effects after skin contact : Repeated or prolonged skin contact may cause irritation.

Symptoms/effects after eye contact : Redness, pain. Blurred vision.

Symptoms/effects after ingestion : Abdominal pain, nausea.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

2-methoxymethylethoxypropanol (34590-94-8)	
LC50, Fish, Pimephales promelas	> 10000 mg/l (96 Hours)
EC50, daphnia, Daphnia magna	> 100 mg/l (48 Hours)
EC50, algae	> 100 mg/l (72 Hours)

Alkyl polyglucoside C10-16 (110615-47-9)	
LC50 - Fish [1]	10 – 100 mg/l
EC0, microorganisms	> 100 mg/l

Amines, coco alkyldimethyl, N-oxides (308062-28-4)	
LC50, Fish, acute, Danio rerio	10-100 mg/l (96 Hours, (OECD 203))
EC50, daphnia, Daphnia magna	4.4 mg/l (48 Hours, (US-EPA))
EC50, algae, Pseudokirchneriella subcapitata	0.11 mg/l (96 Hours, (US-EPA))
EC50, Bacteria, Pseudomonas putida	190 mg/l (16 Hours, (DIN 38412 part 8))

D-Glucopyranose, oligomers, decyl octyl glycosides (68515-73-1)	
LC50 - Fish [1]	190 (≥ 0) mg/l (Danio rerio)
EC50 - Crustacea [1]	> 100 mg/l
EC50 72h - Algae [1]	37 mg/l (Scenedesmus subspicatus)
NOEC chronic crustacea	> 100 mg/l

3-butoxypropan-2-ol, propylene glycol monobutyl ether (5131-66-8)	
EC50 - Crustacea [1]	> 1000 mg/l Test organisms (species): Daphnia magna
EC50 96h - Algae [1]	> 1000 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
LC50, Fish, Poecilia reticulata	560-1000 mg/l (96 Hours)
NOEC, Fish, Poecilia reticulata	180 mg/l (96 Hours)
EC50, daphnia, Daphnia magna	> 1000 mg/l (48 Hours)
NOEC50, daphnia, Daphnia magna	560 mg/l (48 Hours)
NOEC50, algae, Selenastrum capricornutum	560 mg/l (96 Hours)

subtilisin (9014-01-1)	
LC50 - Fish [1]	8.2 mg/l (OECD 203 method)
EC50 - Crustacea [1]	586 µg/l (Daphnie sp.)
ErC50 algae	0.83 mg/l (OECD 201 method)

12.2. Persistence and degradability

2-methoxymethylethoxypropanol (34590-94-8)	
Persistence and degradability	Biodegradable.
Biodegradation	77 – 84 % 28 days

Alkyl polyglucoside C10-16 (110615-47-9)	
Persistence and degradability	Biodegradable.

Amines, coco alkyldimethyl, N-oxides (308062-28-4)	
Persistence and degradability	readily biologically degradable.
Biodegradation	> OECD (301B)

3-butoxypropan-2-ol, propylene glycol monobutyl ether (5131-66-8)	
Persistence and degradability	Biodegradable.
Biodegradation	60 – 90 % 28 days

subtilisin (9014-01-1)	
Persistence and degradability	(OECD 301B method). Biodegradable.

12.3. Bioaccumulative potential

ENZYFOAM	
Partition coefficient n-octanol/water (Log Pow)	The product has not been tested

2-methoxymethylethoxypropanol (34590-94-8)	
Bioaccumulative potential	Slightly or not bioaccumulative.

3-butoxypropan-2-ol, propylene glycol monobutyl ether (5131-66-8)	
Bioconcentration factor (BCF REACH)	3.2
Bioaccumulative potential	not bioaccumulable.

subtilisin (9014-01-1)	
Partition coefficient n-octanol/water (Log Pow)	< 0
Bioaccumulative potential	not bioaccumulable.

12.4. Mobility in soil

2-methoxymethylethoxypropanol (34590-94-8)	
Ecology - soil	Soluble in water.

3-butoxypropan-2-ol, propylene glycol monobutyl ether (5131-66-8)	
Ecology - soil	Soluble in water.

12.5. Other adverse effects

Product at recommended concentration (1%) : Non-hazardous for the environment (non-hazardous mixture)

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional legislation (waste)	:	Disposal must be done according to official regulations.
Waste treatment methods	:	Remove to an authorized waste treatment plant.
Sewage disposal recommendations	:	May be discharged to wastewater treatment installation.
Product at recommended concentration (1%)	:	**Non-hazardous for the environment. No special requirements for sewage disposal.**
Product/Packaging disposal recommendations	:	Dispose of contents/container to hazardous or special waste collection point. When totally empty, containers are recyclable like any other packing.
Ecology - waste materials	:	Collect all waste in suitable and labeled containers and dispose according to local legislation. Avoid release to the environment.
Product at recommended concentration (1%)	:	**Non-hazardous for the environement. No special requirements for waste disposal.**

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name (DOT)	:	Not applicable
Proper Shipping Name (TDG)	:	Not applicable
Proper Shipping Name (IMDG)	:	Not applicable
Proper Shipping Name (IATA)	:	Not applicable

14.3. Transport hazard class(es)

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

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

IMDG
Transport hazard class(es) (IMDG) : Not applicable

IATA
Transport hazard class(es) (IATA) : Not applicable

14.4. Packing group

Packing group (DOT)	:	Not applicable
Packing group (TDG)	:	Not applicable
Packing group (IMDG)	:	Not applicable
Packing group (IATA)	:	Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

DOT
No data available

TDG
No data available

IMDG
No data available

IATA
No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
2-methoxymethylethoxypropanol	34590-94-8	Present	Active	T
Alkyl polyglucoside C10-16	110615-47-9	Present	Active	N;P
Amines, coco alkyldimethyl, N-oxides	308062-28-4	Present	Active	
D-Glucopyranose, oligomers, decyl octyl glycosides	68515-73-1	Present	Active	
3-butoxypropan-2-ol, propylene glycol monobutyl ether	5131-66-8	Present	Active	
subtilisin	9014-01-1	Present	Active	XU
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	Not present	-	

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

No additional information available

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Revision date : 11/17/2022

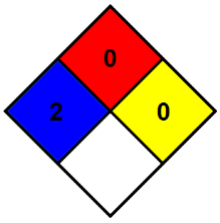
Full text of H-phrases	
H301	Toxic if swallowed
H302	Harmful if swallowed

Full text of H-phrases	
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H331	Toxic if inhaled
H334	May cause an allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Indication of changes:			
Section	**Changed item**	**Change**	**Comments**
2.1			No additional information available

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.