

## SECTION 1: Identification

### 1.1. Identification

Product form : Mixture  
Product name : FILZYM P1  
Product code : POU0388

### 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

### 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

Acute toxicity (oral), Category 4 H302 Harmful if swallowed  
Serious eye damage/eye irritation, Category 1 H318 Causes serious eye damage.  
Respiratory sensitisation, Category 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
Full text of H statements : see section 16

### 2.2. GHS Label elements, including precautionary statements

#### GHS US labelling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

H302 - Harmful if swallowed.  
H318 - Causes serious eye damage.  
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements (GHS US) :

P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P284 - [In case of inadequate ventilation] wear respiratory protection.  
P304+P341 - If inhaled: If breathing is difficult, 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/...  
P501 - Dispose of contents/container to hazardous or special waste collection point

### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

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Name	Product identifier	%	GHS-US classification
Sodium carbonate peroxide	(CAS-No.) 15630-89-4	> 30	Ox. Sol. 3, H272 Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318
sodium carbonate	(CAS-No.) 497-19-8	> 30	Eye Irrit. 2A, H319
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 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
cellulase	(CAS-No.) 9012-54-8	< 0.1	Resp. Sens. 1, H334
amylase, α-	(CAS-No.) 9000-90-2	< 0.1	Resp. Sens. 1, H334

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 you feel unwell, seek medical advice (show the label where possible). Take off immediately all contaminated clothing. Wash clothing before re-using. Call a poison center or a doctor if you feel unwell.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Remove victim to fresh air. Allow the victim to rest. If experiencing respiratory symptoms: Call a poison center or a doctor.
- First-aid measures after skin contact : Wash skin with mild soap and water. Wash skin with plenty of water.
- 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, take medical advice. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
- First-aid measures after ingestion : Rinse mouth. Get medical advice/attention. Call a poison center or a doctor if you feel unwell.

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

- Symptoms/effects after inhalation : Cough. Irritation of the respiratory tract and the other mucous membranes. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Symptoms/effects after skin contact : Redness, pain.
- Symptoms/effects after eye contact : Redness, pain. Blurred vision. Serious damage to eyes.
- 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. Water spray. Dry powder. Foam.
- Unsuitable extinguishing media : None.

#### 5.2. Specific hazards arising from the chemical

- Fire hazard : May intensify fire; oxidiser.
- Explosion hazard : Product is not explosive.

#### 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. Use water spray or fog for cooling exposed containers.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Ensure adequate ventilation. Collect spillage.

##### 6.1.1. For non-emergency personnel

- Protective equipment : Personal protection. See Heading 8.

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Emergency procedures : Ventilate spillage area. Avoid all contact with skin, eyes, or clothing. Do not breathe dust. Evacuate area. Avoid contact with skin and eyes. No open flames, no sparks, and no smoking. Avoid breathing dust/fume/gas/mist/vapours/spray.

### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Personal protection. See Heading 8. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Stop leak if safe to do so. Mark the danger area. Evacuate unnecessary personnel.

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

For containment : Dike for recovery or absorb with appropriate material.

Methods for cleaning up : Mechanically recover the product. Collect spillage. Rinse with plenty of water. Minimise generation of dust. Notify authorities if product enters sewers or public waters.

Other information : Never return spills in original containers for possible later re-use. Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

See Heading 8. For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : Do not breathe dust.

Precautions for safe handling : Ensure good ventilation of the work station. Do not eat, drink or smoke when using this product. Do not handle until all safety precautions have been read and understood. Do not breathe Dust. Do not get in eyes, on skin, or on clothing. Avoid all unnecessary exposure. Wear personal protective equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in original container. Keep only in the original container in a cool, well-ventilated place away from moisture. Keep container closed when not in use. Store in a well-ventilated place. Keep cool.

Incompatible products : None to our knowledge.

Incompatible materials : None to our knowledge. combustible materials.

Storage temperature : 4 - 25 °C

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

Storage area : Store in a dry place. Prevent moisture contact.

Special rules on packaging : Keep only in original container.

Packaging materials : PP.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Sodium carbonate peroxide (15630-89-4)

Not applicable

#### sodium carbonate (497-19-8)

Not applicable

#### subtilisin (9014-01-1)

NIOSH	NIOSH REL (STEL) (mg/m <sup>3</sup> )	0.00006 mg/m <sup>3</sup> 60 minutes average value
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#### cellulase (9012-54-8)

Not applicable

#### amylase, α- (9000-90-2)

Not applicable

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### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure adequate ventilation. Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment. Prevent entry to sewers and public waters. Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Gloves. Safety glasses.

#### Hand protection:

Gloves. (EN 374)

#### Eye protection:

Safety glasses. Eye protection (standard EN 166). Safety glasses

#### Skin and body protection:

Use chemically protective clothing

#### Respiratory protection:

No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation. 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 P (acc. to EN 143). The entrepreneur has to ensure that maintenance cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. [In case of inadequate ventilation] wear respiratory protection.

#### Personal protective equipment symbol(s):



#### Thermal hazard protection:

No specific measures are necessary.

#### 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 : Solid  
Appearance : Powder.  
Colour : white  
Odour : characteristic  
Odour threshold : The product has not been tested  
pH : Not applicable  
Melting point : The product has not been tested  
Freezing point : Not applicable  
Boiling point : Not applicable  
Critical temperature : Not applicable  
Flash point : Not applicable  
Relative evaporation rate (butylacetate=1) : Not applicable  
Flammability (solid, gas) : Non flammable.  
Vapour pressure : The product has not been tested  
Relative vapour density at 20 °C : Not applicable  
Relative density : The product has not been tested  
Solubility : In water, material is partially soluble.

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Log Pow	: The product has not been tested The product has not been tested
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not applicable
Viscosity, kinematic	: No data available
Viscosity, dynamic	: Not applicable
Explosive limits	: Not applicable Not applicable
Explosive properties	: Product is not explosive.
Oxidising properties	: May intensify fire; oxidiser.

### 9.2. Other information

Other properties : Hygroscopic product.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable in use and storage conditions as recommended in item 7. May cause or intensify fire; oxidiser.

### 10.2. Chemical stability

Stable in use and storage conditions as recommended in item 7.

### 10.3. Possibility of hazardous reactions

Stable in use and storage conditions as recommended in item 7.

### 10.4. Conditions to avoid

None. Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials

None under normal conditions. Combustible materials.

### 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

<b>Sodium carbonate peroxide (15630-89-4)</b>	
LD50 oral rat	1034 mg/kg
ATE US (oral)	1034 mg/kg bodyweight
Additional information	LDLo, rabbit, Dermal: > 2000 mg/kg
<b>sodium carbonate (497-19-8)</b>	
LD50 oral rat	> 2000 mg/kg
Additional information	LC50, mouse, Inhalation: 2.3 mg/l (2 Hours) LC50, mouse, Inhalation: > 5000 mg/l (4 Hours)
<b>subtilisin (9014-01-1)</b>	
ATE US (oral)	500 mg/kg bodyweight

Skin corrosion/irritation	: Not classified pH: Not applicable
Serious eye damage/irritation	: Causes serious eye damage. pH: Not applicable
Respiratory or skin sensitisation	: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified

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STOT-single exposure : Not classified

<b>subtilisin (9014-01-1)</b>	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Viscosity, kinematic : No data available

Symptoms/effects after inhalation : Cough. Irritation of the respiratory tract and the other mucous membranes. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Symptoms/effects after skin contact : Redness, pain.

Symptoms/effects after eye contact : Redness, pain. Blurred vision. Serious damage to eyes.

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 nor to cause long-term adverse effects in the environment.

<b>Sodium carbonate peroxide (15630-89-4)</b>	
Additional ecotoxicological information	LC50, fish, Pimephales promelas: 70.7 mg/l (96 Hours) EC50, aquatic invertebrates, daphnia: 4.9 mg/l (48 Hours)

<b>sodium carbonate (497-19-8)</b>	
Additional ecotoxicological information	LC50, Fish: > 200 mg/l (96 Hours) EC50, daphnia, Daphnia magna: > 200 mg/l (48 Hours)

<b>subtilisin (9014-01-1)</b>	
LC50 fish 1	8.2 mg/l (OECD 203 method)
EC50 Daphnia 1	586 µg/l (Daphnie sp.)
ErC50 (algae)	0.83 mg/l (OECD 201 method)

<b>cellulase (9012-54-8)</b>	
Additional ecotoxicological information	EC50, daphnia: > 39,5 mg/l (48 Hours, (OCDE TG 202)) LC50, Fish: > 39,5 mg/l (96 Hours, (OCDE TG 203))

<b>amylase, α- (9000-90-2)</b>	
LC50 fish 1	58.3 - 326.7 mg/l
EC50 Daphnia 1	31.7 - 457 mg/l
ErC50 (algae)	>= 5.2 mg/l
Additional ecotoxicological information	EC50, daphnia: 31,7 - 457 mg/l (48 Hours, (OCDE 202)) ErC50, algae: ≥ 5,2 mg/l (72 Hours, (OCDE 201)) LC50, fish: 58,3 - 326,7 mg/l (96 Hours, (OCDE 203))

### 12.2. Persistence and degradability

<b>FILZYM P1</b>	
Persistence and degradability	Biodegradable.

<b>Sodium carbonate peroxide (15630-89-4)</b>	
Persistence and degradability	Not applicable. Mineral.

<b>sodium carbonate (497-19-8)</b>	
Persistence and degradability	Mineral.

<b>subtilisin (9014-01-1)</b>	
Persistence and degradability	Readily biodegradable, according to appropriate OECD test. (OECD 301B method).

<b>cellulase (9012-54-8)</b>	
Persistence and degradability	Biodegradable.

<b>amylase, α- (9000-90-2)</b>	
Persistence and degradability	Readily biodegradable, according to appropriate OECD test.
Biodegradation	(OECD 301F method)

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### 12.3. Bioaccumulative potential

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Log Pow	The product has not been tested
Log Kow	The product has not been tested
sodium carbonate (497-19-8)	
Bioaccumulative potential	not bioaccumulable.
subtilisin (9014-01-1)	
Log Pow	< 0
Bioaccumulative potential	not bioaccumulable.
cellulase (9012-54-8)	
Log Pow	< 0
Bioaccumulative potential	not bioaccumulable.
amylase, $\alpha$ - (9000-90-2)	
Log Pow	< 0
Bioaccumulative potential	not bioaccumulable.

### 12.4. Mobility in soil

sodium carbonate (497-19-8)	
Ecology - soil	Soluble in water.
cellulase (9012-54-8)	
Ecology - soil	Soluble.

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Regional legislation (waste)	: Dispose in a safe manner in accordance with local/national regulations.
Waste treatment methods	: Remove to an authorized waste treatment plant. Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: May be discharged to wastewater treatment installation.
Product/Packaging disposal recommendations	: Dispose of this material and its container at 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 labelled containers and dispose according to local legislation. Avoid release to the environment.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Other information : No supplementary information available.

### Transportation of Dangerous Goods

#### Transport by sea

Transport document description (IMDG) : UN ----- TO BE COMPLETED/CALCULATED -----  
UN-No. (IMDG) : ----- TO BE COMPLETED/CALCULATED -----

#### Air transport

Transport document description (IATA) : UN ----- TO BE COMPLETED/CALCULATED -----  
UN-No. (IATA) : ----- TO BE COMPLETED/CALCULATED -----

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### SECTION 15: Regulatory information

#### 15.1. US 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

<b>subtilisin (9014-01-1)</b>	
EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).
<b>cellulase (9012-54-8)</b>	
EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).
<b>amylase, <math>\alpha</math>- (9000-90-2)</b>	
EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).

#### 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

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

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Revision date : 05/12/2015

Full text of H-statements:

H272	May intensify fire; oxidiser.
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.



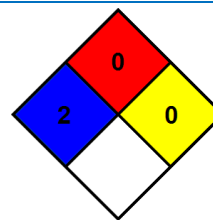
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NFPA health hazard	: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
NFPA fire hazard	: 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.
NFPA reactivity	: 0 - Material that in themselves are normally stable, even under fire conditions.



SDS US (GHS HazCom 2012)

*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*