

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
 Product name : ENZYBREW 10
 Product code : POU0938
 Type of product : Detergent

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Professional use

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

REALCO S.A.
 Avenue Albert Einstein, 15
 B-1348 Louvain-la-Neuve - Belgium
 T +32 (0)10 45 30 00 - F +32 (0)10 45 63 63
info@realco.be - www.realco.be

1.4. Emergency telephone number

Emergency number : Int+32-70-245.245

| Country | Organisation/Company | Address | Emergency number | Comment |
|---------|---|-------------------------------|------------------|---------|
| | Centre Anti-Poisons/Antigifcentrum c/o Hôpital Central de la Base - Reine Astrid | Rue Bruyn B -1120 Brussels | +32 70 245 245 | |

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Serious eye damage/eye irritation, Category 2 H319

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H319 - Causes serious eye irritation

Precautionary statements (CLP) :

P264 - Wash hands, forearms and face thoroughly after handling
 P280 - Wear protective gloves, eye 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
 P337+P313 - If eye irritation persists: Get medical advice/attention

EUH-statements :

EUH208 - Contains cellulase, Protease (Subtilisin). May produce an allergic reaction

2.3. Other hazards

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

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according to Regulation (EC) No. 453/2010

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

| Name | Product identifier | % | Classification according to Directive 67/548/EEC | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---------------------------|---|---------|---|--|
| sodium carbonate | (CAS No) 497-19-8 (EC no) 207-838-8 (EC index no) 011-005-00-2 (REACH-no) 01-2119485498-19 | > 30 | Xi; R36 | Eye Irrit. 2, H319 |
| Sodium carbonate peroxide | (CAS No) 15630-89-4 (EC no) 239-707-6 (REACH-no) 01-2119457268-30 | 15 - 30 | O; R8 Xn; R22 Xi; R36/38 | Ox. Sol. 3, H272 Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 |
| Protease (Subtilisin) | (CAS No) 9014-01-1 (EC no) 232-752-2 (REACH-no) 01-2119480434-38 | 0.1 - 1 | Xn; R22 R42 Xi; R41 Xi; R37/38 N; R50 | 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 (EC no) 232-734-4 (EC index no) 647-002-00-3 | 0.1 - 1 | R42 | Resp. Sens. 1, H334 |

Specific concentration limits:

| Name | Product identifier | Specific concentration limits: DSD/DPD | Specific concentration limits: CLP |
|---------------------------|---|--|--|
| Sodium carbonate peroxide | (CAS No) 15630-89-4 (EC no) 239-707-6 (REACH-no) 01-2119457268-30 | | (C < 25) Acute Tox. 4 (Oral), H302 (10 =<C < 25) Eye Irrit. 2, H319 (C >= 25) Eye Dam. 1, H318 |

Full text of R- 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. |
| First-aid measures after inhalation | : Remove victim to fresh air. Allow the victim to rest. |
| First-aid measures after skin contact | : Wash skin with mild soap and 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. |
| First-aid measures after ingestion | : Rinse mouth. Get medical advice/attention. |

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

| | |
|--------------------------------------|--|
| Symptoms/injuries after inhalation | : Cough. Irritation of the respiratory tract and the other mucous membranes. |
| Symptoms/injuries after skin contact | : Redness, pain. |
| Symptoms/injuries after eye contact | : Redness, pain. Blurred vision. |
| Symptoms/injuries after ingestion | : Abdominal pain, nausea. |

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

| | |
|--------------------------------|---|
| Suitable extinguishing media | : All extinguishing agents can be used. |
| Unsuitable extinguishing media | : None. |

5.2. Special hazards arising from the substance or mixture

| | |
|--|--|
| Fire hazard | : May intensify fire; oxidiser. |
| Explosion hazard | : Product is not explosive. |
| Hazardous decomposition products in case of fire | : Thermal decomposition generates : Carbon monoxide. Carbon dioxide. |

5.3. Advice for firefighters

| | |
|-----------------------------|-------------------------------------|
| Precautionary measures fire | : Wear proper protective equipment. |
|-----------------------------|-------------------------------------|

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- 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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Ensure adequate ventilation. Sweep or shovel spills.

6.1.1. For non-emergency personnel

- Protective equipment : Personal protection. See Heading 8.2.
- Emergency procedures : Avoid all contact with skin, eyes, or clothing. Do not breathe dust. Evacuate area.

6.1.2. For emergency responders

- Protective equipment : Personal protection. See Heading 8.2. Equip cleanup crew with proper protection.
- Emergency procedures : Mark out the contaminated area with signs and prevent access to unauthorized personnel. Evacuate unnecessary personnel. Stop leak if safe to do so.

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 : Collect spillage. Minimize generation of dust. Rinse with plenty of water.
- Other information : Never return spills in original containers for possible later re-use.

6.4. Reference to other sections

- See Heading 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : 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.
- 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.

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.
- Incompatible products : None, to our knowledge.
- Incompatible materials : None, to our knowledge.
- 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.

7.3. Specific end use(s)

- Cleaning product.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| Protease (Subtilisin) (9014-01-1) | | |
|-----------------------------------|----------------------------------|---------------------------|
| Belgium | Limit value (mg/m ³) | 0,00006 mg/m ³ |

8.2. Exposure controls

- Appropriate engineering controls : Ensure adequate air ventilation.
- Personal protective equipment : Gloves. Safety glasses.

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| | |
|--------------------------|--|
| Hand protection | : Gloves. (EN 374) |
| Eye protection | : Safety glasses. Eye protection (standard EN 166) |
| 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 |



| | |
|---------------------------------|--|
| Thermal hazard protection | : None necessary. |
| Environmental exposure controls | : Avoid release to the environment. Prevent entry to sewers and public waters. |
| Other information | : Emergency eye wash fountains 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 | : Not tested |
| pH | : Not applicable |
| Relative evaporation rate (butylacetate=1) | : Not applicable |
| Melting point | : Not tested |
| Freezing point | : Not applicable |
| Boiling point | : Not applicable |
| Flash point | : Not applicable |
| Critical temperature | : Not applicable |
| Auto-ignition temperature | : Not applicable |
| Decomposition temperature | : Not applicable |
| Flammability (solid, gas) | : Non flammable |
| Vapour pressure | : Not tested |
| Relative vapour density at 20 °C | : Not applicable |
| Relative density | : Not tested |
| Density | : 1050 - 1350 kg/m ³ |
| Solubility | : In water, material is partially soluble. |
| Log Pow | : Not tested |
| Log Kow | : Not tested |
| Viscosity, kinematic | : Not applicable |
| Viscosity, dynamic | : Not applicable |
| Explosive properties | : Product is not explosive. |
| Oxidising properties | : Oxidizer. |
| Explosive limits | : Not applicable |

9.2. Other information

| | |
|------------------|------------------------|
| Other properties | : Hygroscopic product. |
|------------------|------------------------|

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions of storage, handling and use.

10.2. Chemical stability

Stable under normal conditions of storage, handling and use.

10.3. Possibility of hazardous reactions

Stable under normal conditions of storage, handling and use.

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10.4. Conditions to avoid

None.

10.5. Incompatible materials

None under normal conditions.

10.6. Hazardous decomposition products

In the event of fire, may decompose : Carbon oxides (CO, CO₂).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

| sodium carbonate (497-19-8) | |
|---|-----------------------|
| LD50 oral rat | > 2000 mg/kg |
| LC50, mouse, Inhalation | 2.3 mg/l (2 Hours) |
| LC50, mouse, Inhalation | > 5000 mg/l (4 Hours) |
| Sodium carbonate peroxide (15630-89-4) | |
| LD50 oral rat | 1034 mg/kg |
| LDLo, rabbit, Dermal | > 2000 mg/kg |
| Protease (Subtilisin) (9014-01-1) | |
| LD50 oral | 1800 mg/kg bodyweight |
| cellulase (9012-54-8) | |
| LD50 oral | > 2000 mg/kg |

Skin corrosion/irritation : Not classified
pH: Not applicable

Serious eye damage/irritation : Causes serious eye irritation.
pH: Not applicable

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

| sodium carbonate (497-19-8) | |
|---|---------------------------------------|
| LC50, Fish | > 200 mg/l (96 Hours) |
| EC50, daphnia, Daphnia magna | > 200 mg/l (48 Hours) |
| Sodium carbonate peroxide (15630-89-4) | |
| LC50, fish, Pimephales promelas | 70.7 mg/l (96 Hours) |
| EC50, aquatic invertebrates, daphnia | 4.9 mg/l (48 Hours) |
| Protease (Subtilisin) (9014-01-1) | |
| EC50, daphnia | 586 µg /l (48 Hours) |
| ErC50, algae | 830 µg /l (72 Hours) |
| LC50, fish | 8,2 mg/l (96 Hours) |
| cellulase (9012-54-8) | |
| EC50, daphnia | > 39,5 mg/l (48 Hours, (OCDE TG 202)) |
| LC50, Fish | > 39,5 mg/l (96 Hours, (OCDE TG 203)) |

12.2. Persistence and degradability

| ENZYBREW 10 | |
|------------------------------------|------------------------|
| Persistence and degradability | Readily biodegradable. |
| sodium carbonate (497-19-8) | |
| Persistence and degradability | Inorganic product. |

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| Sodium carbonate peroxide (15630-89-4) | |
|---|------------------------------------|
| Persistence and degradability | Not applicable. Inorganic product. |

| Protease (Subtilisin) (9014-01-1) | |
|--|------------------------|
| Persistence and degradability | Readily biodegradable. |

| cellulase (9012-54-8) | |
|-------------------------------|------------------------|
| Persistence and degradability | Readily biodegradable. |

12.3. Bioaccumulative potential

| ENZYBREW 10 | |
|--------------------|------------|
| Log Pow | Not tested |
| Log Kow | Not tested |

| sodium carbonate (497-19-8) | |
|------------------------------------|---------------------|
| Bioaccumulative potential | Not bioaccumulable. |

| Protease (Subtilisin) (9014-01-1) | |
|--|---------------------|
| Log Pow | < 0 |
| Bioaccumulative potential | Not bioaccumulable. |

| cellulase (9012-54-8) | |
|------------------------------|---------------------|
| 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. Results of PBT and vPvB assessment

| ENZYBREW 10 | |
|--|---|
| This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII | |
| Component | |
| cellulase (9012-54-8) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |
| Protease (Subtilisin) (9014-01-1) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |
| Sodium carbonate peroxide (15630-89-4) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII |

12.6. Other adverse effects

Additional information : No supplementary information available

SECTION 13: Disposal considerations

13.1. Waste treatment 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. |
| Waste 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 | : Avoid release to the environment. |
| European List of Waste (LoW) code | : 20 01 29* - detergents containing dangerous substances |
| H code | : H4 - 'Irritant': non-corrosive substances and preparations which, through immediate, prolonged or repeated contact with the skin or mucous membrane, can cause inflammation |
| R code/ D code | : D9 - Physico-chemical treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D 1 to D 12 (e.g. evaporation, drying, calcination, etc.) |

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

| | |
|---------------|------------------|
| UN-No. (ADR) | : Not applicable |
| UN-No. (IMDG) | : Not applicable |
| UN-No. (IATA) | : Not applicable |
| UN-No. (ADN) | : Not applicable |

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UN-No. (RID) : Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not applicable

Proper Shipping Name (IMDG) : Not applicable

Proper Shipping Name (IATA) : Not applicable

Proper Shipping Name (ADN) : Not applicable

Proper Shipping Name (RID) : Not applicable

14.3. Transport hazard class(es)

ADR

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

IMDG

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

IATA

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

ADN

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

RID

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

14.4. Packing group

Packing group (ADR) : Not applicable

Packing group (IMDG) : Not applicable

Packing group (IATA) : Not applicable

Packing group (ADN) : Not applicable

Packing group (RID) : Not applicable

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

No data available

- Transport by sea

No data available

- Air transport

No data available

- Inland waterway transport

No data available

- Rail transport

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. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

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according to Regulation (EC) No. 453/2010

Detergent Regulation : Labelling of contents:

| Component | % |
|-------------------------------|--------|
| oxygen-based bleaching agents | 15-30% |
| enzymes | |

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out for the substance or the mixture by the supplier

SECTION 16: Other information

Indication of changes:

| | Supersedes | Modified | |
|---|--|----------|--|
| | Date of issue | Modified | |
| | Revision date | Modified | |
| 3 | Composition/information on ingredients | Modified | |

Full text of R-, H- and EUH-statements:

| | |
|---------------------|--|
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Aquatic Acute 1 | Hazardous to the aquatic environment — Acute Hazard, Category 1 |
| Aquatic Chronic 2 | Hazardous to the aquatic environment — Chronic Hazard, Category 2 |
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| Ox. Sol. 3 | Oxidising Solids, Category 3 |
| Resp. Sens. 1 | Sensitisation — Respiratory, Category 1 |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |
| 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 |
| EUH208 | Contains . May produce an allergic reaction |

SDS EU (REACH Annex II)

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