



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No. 2015/830

Revision date: 13/6/2018  
Version: 5  
Language: en-GB,IE  
Date of print: 25/7/2018

## Enzyme

Material number 186017

Page: 1 of 7

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

#### 1.1 Product identifier

Trade name: Enzyme  
This safety data sheet pertains to the following products:  
806220 Bromelin Erytype ready for use 10 x 50 mL  
805012 Bromelin, 10 mL

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

General use: Use as laboratory reagent.  
Only for industrial users.

#### 1.3 Details of the supplier of the safety data sheet

Company name: Bio-Rad Medical Diagnostics GmbH  
Street/POB-No.: Industriestr. 1  
Postal Code, city: 63303 Dreieich  
Germany  
WWW: [www.medizinische-diagnostik-dreieich.de](http://www.medizinische-diagnostik-dreieich.de)  
E-mail: [contact.bmd@bio-rad.com](mailto:contact.bmd@bio-rad.com)  
Telephone: +49 (0)6103-3130-0  
Telefax: +49 (0)6103-3130-646  
Dept. responsible for information:  
Produktmanagement Transfusion  
Telephone: 06103 3130-611  
Telefax: 06103 3130-724

#### 1.4 Emergency telephone number

GIZ-Nord, Göttingen, Germany,  
Telephone: +49 551-19240

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification according to EC regulation 1272/2008 (CLP)  
This mixture is classified as not hazardous.

#### 2.2 Label elements

##### Labelling (CLP)

Hazard statements: not applicable

Precautionary statements: not applicable

##### Special labelling

EUH208 Contains bromelin. May produce an allergic reaction.  
EUH210 Safety data sheet available on request.



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## Enzyme

Material number 186017

Page: 2 of 7

### 2.3 Other hazards

No risks worthy of mention.

Results of PBT and vPvB assessment:

No data available

## SECTION 3: Composition / information on ingredients

3.1 Substances: not applicable

### 3.2 Mixtures

Chemical characterisation: Aqueous solution of anorganic salts and organic compounds.  
Contains surfactants and antibiotics.

Hazardous ingredients:

Ingredient	Designation	Content	Classification
EC No. 232-572-4 CAS 9001-00-7	Bromelin	< 1 %	Skin Irrit. 2; H315. Eye Irrit. 2; H319. Resp. Sens. 1; H334. STOT SE 3; H335.

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

Additional information: The maximum workplace exposure limits are, where necessary, listed in section 8.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

In case of inhalation: Provide fresh air. Seek medical treatment in case of troubles.

Following skin contact: Remove residues with water. Change contaminated clothing. In case of skin reactions, consult a physician.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. In case of eye irritation consult an ophthalmologist.

After swallowing: Rinse mouth and drink large quantities of water.  
Seek medical attention. Never give anything by mouth to an unconscious person.

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

In case of inhalation:  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

### 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:

Product is non-combustible. Extinguishing materials should therefore be selected according to surroundings.



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Date of print: 25/7/2018

## Enzyme

Material number 186017

Page: 3 of 7

### 5.2 Special hazards arising from the substance or mixture

Fires in the immediate vicinity may cause the development of dangerous vapours. In the event of a fire, the following may be produced when the water evaporates: Carbon monoxide and carbon dioxide.

### 5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear self-contained breathing apparatus. Wear appropriate protective equipment.

Additional information:

Hazchem-Code: -

Do not allow fire water to penetrate into surface or ground water.

## SECTION 6: Accidental release measures

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

Do not breathe vapour/aerosol.

Avoid contact with the substance. Provide adequate ventilation. Wear personal protection equipment.

### 6.2 Environmental precautions

Do not allow to penetrate into soil, waterbodies or drains.

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

Soak up with absorbent materials such as sand, siliceous earth, acid- or universal binder.

Store in special closed containers and dispose of according to ordinance. Final cleaning.

### 6.4 Reference to other sections

Refer additionally to section 8 and 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advices on safe handling: Avoid contact with skin and eyes. Do not breathe vapours. Wear appropriate protective equipment.

Keep all containers, equipment and working place clean.

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

Requirements for storerooms and containers:

Keep containers tightly closed and at a temperature between 2 °C and 8 °C.

Hints on joint storage:

Do not store together with acids/alkalies and oxidation agents.

### 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Additional information: Contains no substances with occupational exposure limit values.



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Date of print: 25/7/2018

## Enzyme

Material number 186017

Page: 4 of 7

### 8.2 Exposure controls

Provide good ventilation and/or an exhaust system in the work area.

### Personal protection equipment

#### Occupational exposure controls

- Respiratory protection: Respiratory protection must be worn whenever the WEL levels have been exceeded. The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product.
- Hand protection: Protective gloves according to EN 374.  
Glove material: Nitrile rubber - Breakthrough time: > 480 min.  
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.
- Eye protection: Tightly sealed goggles according to EN 166.
- Body protection: Wear suitable protective clothing.
- General protection and hygiene measures: Avoid contact with skin and eyes. Do not breathe vapour/aerosol. Change contaminated clothing. After work, wash hands and face.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- Appearance: Form: liquid  
Colour: yellowish
- Odour: odourless
- Odour threshold: No data available
- pH value: No data available
- Melting point/freezing point: No data available
- Initial boiling point and boiling range: approx. 100 °C
- Flash point/flash point range: No data available
- Evaporation rate: No data available
- Flammability: not applicable
- Explosion limits: LEL (Lower Explosion Limit): not applicable  
UEL (Upper Explosive Limit): not applicable
- Vapour pressure: No data available
- Vapour density: No data available
- Density: at 20 °C: approx. 1 g/mL
- Solubility: soluble in: Ethanol
- Water solubility: soluble
- Partition coefficient: n-octanol/water: No data available
- Auto-ignition temperature: not applicable
- Decomposition temperature: No data available
- Viscosity, kinematic: No data available
- Explosive properties: not applicable
- Oxidizing characteristics: No data available

### 9.2 Other information

- Additional information: No data available



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## Enzyme

Material number 186017

Page: 5 of 7

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

refer to 10.3

#### 10.2 Chemical stability

Stable under recommended storage conditions.

#### 10.3 Possibility of hazardous reactions

No hazardous reactions known.

#### 10.4 Conditions to avoid

Protect against heat /sun rays.

#### 10.5 Incompatible materials

Strong oxidizing agents, strong acids and alkalis.

#### 10.6 Hazardous decomposition products

In the event of a fire, the following may be produced when the water evaporates: Carbon monoxide and carbon dioxide.

Thermal decomposition: No data available

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

Toxicological effects:

- Acute toxicity (oral): Lack of data.
- Acute toxicity (dermal): Lack of data.
- Acute toxicity (inhalative): Lack of data.
- Skin corrosion/irritation: Lack of data.
- Serious eye damage/irritation: Lack of data.
- Sensitisation to the respiratory tract: Lack of data.
- Skin sensitisation: Lack of data.
- Germ cell mutagenicity/Genotoxicity: Lack of data.
- Carcinogenicity: Lack of data.
- Reproductive toxicity: Lack of data.
- Effects on or via lactation: Lack of data.
- Specific target organ toxicity (single exposure): Lack of data.
- Specific target organ toxicity (repeated exposure): Lack of data.
- Aspiration hazard: Lack of data.

#### Symptoms

In case of inhalation:  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.



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Date of print: 25/7/2018

## Enzyme

Material number 186017

Page: 6 of 7

### SECTION 12: Ecological information

#### 12.1 Toxicity

Further details: No data available

#### 12.2 Persistence and degradability

Further details: No data available

#### 12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:  
No data available

#### 12.4 Mobility in soil

No data available

#### 12.5 Results of PBT and vPvB assessment

No data available

#### 12.6 Other adverse effects

General information: Do not allow to penetrate into soil, waterbodies or drains.

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

##### Product

Waste key number: 16 10 02 = aqueous liquid wastes other than those mentioned in 16 10 01  
Recommendation: Small quantities can be disposed of with the domestic waste or burnt, with due observance of regulations of local authorities. Large quantities are hazardous waste and must be disposed of accordingly.

##### Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation.  
Handle contaminated packages in the same way as the substance itself.  
Non-contaminated packages may be recycled.

### SECTION 14: Transport information

#### 14.1 UN number

ADR/RID, IMDG, IATA-DGR:  
not applicable

#### 14.2 UN proper shipping name

ADR/RID, IMDG, IATA-DGR:  
Not restricted

#### 14.3 Transport hazard class(es)

ADR/RID, IMDG, IATA-DGR:  
not applicable



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Date of print: 25/7/2018

## Enzyme

Material number 186017

Page: 7 of 7

### 14.4 Packing group

ADR/RID, IMDG, IATA-DGR:

not applicable

### 14.5 Environmental hazards

Marine pollutant:

no

### 14.6 Special precautions for user

No dangerous good in sense of these transport regulations.

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

No data available

## SECTION 15: Regulatory information

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

#### National regulations - Great Britain

Hazchem-Code:

-

No data available

### 15.2 Chemical Safety Assessment

For this mixture a chemical safety assessment is not required.

## SECTION 16: Other information

### Further information

Wording of the H-phrases under paragraph 2 and 3:

H315 = Causes skin irritation.

H319 = Causes serious eye irritation.

H334 = May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 = May cause respiratory irritation.

EUH208 = Contains bromelin. May produce an allergic reaction.

EUH210 = Safety data sheet available on request.

Reason of change:

Changes in section 1: Company/undertaking identification

Changes in section 14: Transport information

Changes in section 16: Other information

Date of first version:

4/9/2014

### Department issuing data sheet

Contact person:

see section 1: Dept. responsible for information

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.