



# SAFETY DATA SHEET

in accordance with 29 CFR 1910.1200 and ANSI standard Z400.1-2010

## Bromelin for Erytype

Material number 186020

Revision date: 5/30/2017

Version: 2

Language: en-US, CA

Date of print: 12/13/2017

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## 1. Product and company identification

### Product identifier

Trade name: Bromelin for Erytype  
This safety data sheet pertains to the following products:  
806210100 Bromelin for Erytype

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

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

### 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

### Emergency phone number

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

## 2. Hazards identification

### Emergency overview

Appearance: Form: liquid  
Color: yellowish  
Odor: odorless  
Classification: Respiratory Sensitizer - Category 1;  
Hazard symbols:



Signal word: **Danger**  
Hazard statements: May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
Precautionary statements:  
Avoid breathing vapors/spray.  
In case of inadequate ventilation wear respiratory protection.  
IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.  
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.



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### Regulatory status

This material is considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200) and SIMDUT in Canada.

### Hazards not otherwise classified

see section 11: Toxicological information

## 3. Composition / Information on ingredients

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

Relevant ingredients:

CAS No.	Designation	Content	Classification
CAS 9001-00-7	Bromelin	< 2 %	Skin Irritation - Category 2. Eye Irritation - Category 2A. Respiratory Sensitizer - Category 1. Specific Target Organ Toxicity (Single Exposure) - Category 3.

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

## 4. 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. Remove contact lenses, if present and easy to do. Continue rinsing. 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.

### Most important symptoms/effects, acute and delayed

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

### Information to physician

Treat symptomatically.

## 5. Fire fighting measures

Flash point/flash point range: No data available

Auto-ignition temperature: not applicable

Suitable extinguishing media: Product is non-combustible. Extinguishing materials should therefore be selected according to surroundings.



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### Specific hazards arising from the chemical

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

Protective equipment and precautions for firefighters:

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

Additional information:

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

## 6. Accidental release measures

Personal precautions:

Do not breathe vapor or spray.

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

Environmental precautions:

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

Methods for clean-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.

## 7. Handling and storage

### Handling

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

Keep all containers, equipment and working place clean.

### Storage

Requirements for storerooms and containers:

Keep containers tightly closed and at a temperature between 35.6 °F and 46.4 °F.

Hints on joint storage:

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

## 8. Exposure controls / personal protection

### Engineering controls

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

See also information in chapter 7, section storage.

### Personal protection equipment (PPE)

Eye/face protection

Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010.

Skin protection

Wear suitable protective clothing.

Protective gloves according to OSHA Standard - 29 CFR: 1910.138.

Glove material: Nitrile rubber - Breakthrough time: >480 min.

Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Respiratory protection:

When vapors form, use respiratory protection. The filter class must be suitable for the maximum contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product.



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### General hygiene considerations:

Avoid contact with skin and eyes. Do not breathe vapor or spray. Change contaminated clothing. After work, wash hands and face.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

Appearance:	Form: liquid Color: yellowish
Odor:	odorless
Odor threshold:	No data available
pH value:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	approx. 212 °F
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
Vapor pressure:	No data available
Vapor density:	No data available
Density:	at 68 °F: approx. 1 g/mL
Solubility:	soluble in: Ethanol
Water solubility:	soluble
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	not applicable
Thermal decomposition:	No data available
Explosive properties:	not applicable

## 10. Stability and reactivity

Reactivity:	No data available
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions	No hazardous reactions known.
Conditions to avoid:	Protect against heat /sun rays.
Incompatible materials:	Strong oxidizing agents, strong acids and alkalis.
Thermal decomposition:	No data available



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## 11. Toxicological information

### Toxicological tests

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: Respiratory Sensitizer -  
Category 1 = May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
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.

## 12. Ecological information

### Ecotoxicity

Further details: No data available

### Mobility in soil

No data available

### Persistence and degradability

Further details: No data available

### Additional ecological information

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

## 13. Disposal considerations

### Product

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.



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### 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.

## 14. Transport information

### USA: Department of Transportation (DOT)

Proper shipping name: Not restricted

### Canada: Transportation of Dangerous Goods (TDG)

Shipping name: Not restricted

### Sea transport (IMDG)

Proper shipping name: Not restricted

Marine pollutant: no

### Air transport (IATA)

Proper shipping name: Not restricted

### Further information

No dangerous good in sense of these transport regulations.

## 15. Regulatory information

### National regulations - U.S. Federal Regulations

Sodium chloride: TSCA Inventory: listed  
TSCA HPVC: not listed

Citric acid monohydrate: TSCA Inventory: not listed  
TSCA listed: Citric acid anhydrous CAS 77-92-9

Trisodium citrate - 2-hydrate: TSCA Inventory: not listed  
TSCA listed: Trisodium citrate, anhydrous CAS No. 68-04-2

Polyethylene glycol: TSCA Inventory: listed; EPA flags XU  
TSCA HPVC: not listed

Bromelin: TSCA Inventory: listed; EPA flags XU  
TSCA HPVC: not listed

### National regulations - Canada

No data available

## 16. Other information

Text for labeling: Contains < 2 % Bromelin. Safety data sheet available on request.



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Hazard rating systems:



NFPA Hazard Rating:

Health: 2 (Moderate)

Fire: 0 (Minimal)

Reactivity: 0 (Minimal)

HMIS Version III Rating:

Health: 2 (Moderate)

Flammability: 0 (Minimal)

Physical Hazard: 0 (Minimal)

Personal Protection: X = Consult your supervisor

HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0
	X

Reason of change: General revision

Date of first version: 12/10/2014

### Department issuing data sheet

Contact person: see section 1: Dept. responsible for information

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.