



1. Identification of the substance and of the company

1.1. Product identifier

Substance name/Trade name : Papain
EC no : 232-627-2
CAS No. : 9001-73-4
Synonyms: Papaya peptidase

1.2. Relevant identified uses of the substance

Main use category : Industrial use
Use of the substance/preparation : Food

1.3. Details of the supplier

Company identification

Bauer Handels GmbH



Vertrieb Schweiz:
Bauer Handels GmbH
Allmendstrasse 17
CH-8320 Fehraltorf
Tel. +41 (0) 44 939 18 68

Vertrieb Deutschland & EU:
Bauer Handels GmbH
Freibühlstrasse 6
DE-78224 Singen
Tel. +49 (0) 7731 926 44 16

1.4. Emergency number

www.taxidermy.ch info@taxidermy.ch

2. Hazards identification

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

2.1. Classification of the substance:

GHS08:

Sensitization Respirat. Cat.1 – H334

GHS07:

Skin Irritation Cat.2 – H315

Eye Irritation Cat.2 – H319 – Category 2B: reversible within 7 days.

Respiratory Irritation Cat.3 – H335

2.2. Label elements:

Hazard pictograms [CLP]



GHS 07



GHS 08

CLP signal word :

Exclamation mark and health hazard

Hazard statement :

H315 = Causes skin irritation

H319 = Causes eye irritation

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

H335 = May cause respiratory irritation



Precautionary statements :

- P261 = Avoid breathing dust.
- P264 = Wash hands thoroughly after handling.
- P271 = Use in a well-ventilated area.
- P280 = Wear protective clothing, protective gloves and eye/face protection.
- P284 = Wear respiratory protection.
- P312 = Call a POISON CENTER or doctor/physician if you feel unwell.
- P302+P352 = If ON SKIN: wash with plenty of soap and water.
- P304+P341 = If INHALED: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P304+P340 = IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305+P351+P338 = If EYE CONTACT: rinse cautiously with water for several minutes. Remove contact lenses, if present or easy to do. Continue rinsing.
- P332+P313 = If skin irritation occurs: Get medical advice/attention.
- P337+P313 = If eye irritation persists: get medical advice/attention.
- P342+P311 = If experiencing respiratory symptoms: call a POISON CENTER or doctor/physician.
- P362= Take off contaminated clothing and wash before reuse.
- P403+ P233 = Store in a well-ventilated place. Keep container tightly closed.

2.3. Other hazards: No data available.

3. Composition / information on ingredients

3.1. Substance

Substances percentage depending on product (see specific Technical Data Sheet of product).

Name	CAS No.	EINECS No.	Enzyme nomenclature
Papain	9001-73-4	232-627-2	EC 3.4.22.2
Sodium metabisulfite E223	7681-57-4	231-673-0	Not applicable
Glycerin	56-81-5	200-289-5	Not applicable
Sorbitol	50-70-4	200-06-15	Not applicable

4. First aid measures

4.1. Description of first aid measures

4.1.1 Skin contact: Wash off with plenty of water. Remove contaminated clothing. Wash material from skin with soap and water and rinse thoroughly with clean water. Obtain medical attention as needed or if irritation develops. Clean contaminated clothing before use.

4.1.2 Eyes contact: Check for contact lenses and remove if present. Rinse eyes with plenty of water for least 15 minutes. If symptoms such as redness and irritation persist, obtain medical attention.

4.1.3 Ingestion: Rinse mouth and throat thoroughly with water. May be harmful if swallowed. Obtain medical attention as needed.



4.1.4 Inhalation: Remove person from exposure then obtain necessary medical attention. If symptoms of irritation or sensitization (shortness of breath, wheezing or laboured coughing) occur, consult a doctor.

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

4.2.1 Skin contact: Skin irritation, redness.

4.2.2 Eyes contact: Serious eye irritation, redness. Watering eye.

4.2.3 Ingestion: Irritation to mouth, throat and stomach.

4.2.4 Inhalation: Respiratory tract irritation, coughing, wheezing, breathing difficulties. Asthmatic symptoms.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician: Treat symptomatically.

Specific treatment : No specific treatment.

5. Firefighting measures

5.1. Extinguishing media: Suitable extinguishing agents: CO₂, powder or water spray.

5.2. Special hazards arising from the substance: No further relevant information available.

5.3. Advice for firefighters: Do not attempt to take action without suitable protective equipment. Wear self-contained breathing apparatus. Complete protective clothing conforming to European standard EN469:2005 or American standard NFPA1971:2007.

6. Accidental release measures

6.1. Personal precautions: Wear appropriate protective equipment (avoid skin, eyes and respiratory track contact). Ensure adequate ventilation. Avoid breathing vapours, mist or gas.

6.2. Environmental precautions: Prevent further leakage or spillage.

6.2.1 After spillage / leakage: Rinse with plenty water.

Spreading of high importance: sweep or collect spilled material and place in appropriate container for disposal. Dilute residues and flush. The spraying may be slippery.

6.3. Methods and material for containment and cleaning up: Take up by mechanical means. Dilute remainder with plenty of water. Avoid splashing and high pressure washing. Provide for sufficient ventilation. Wash contaminated clothing before use.

6.4. Reference to other sections: See section 7 for information on safe handling.

See section 8 for information on personal protection equipment.

See section 13 for disposal information.

7. Handling and storage

7.1. Precautions for safe handling: Keep container closed when not in use. Wear appropriate protective equipment (avoid skin, eyes and respiratory track contact). It is important to prevent direct contact with skin. Provide for sufficient ventilation. Wash contaminated clothing before use.

7.2. Conditions for safe storage

7.2.1 Storage conditions: Keep container tightly closed in a cool dry place (2-8°C), out of direct light exposure.

7.2.2 Incompatible products: No further relevant information available.

7.3. Specific end use(s): No further relevant information available.



8. Exposure controls/personal protection

8.1. Control parameters: Ingredients with limit values that require monitoring at the workspace : not required. Additional information about design of technical facilities : No further data; see section 7.

8.2. Exposure Controls

8.2.1. Respiratory protection: Wear an appropriate mask.

8.2.2. Eye protection: Protecting glasses or eye shield.

8.2.3. Skin protection: Lab coat, apron, dungarees or other protective clothing to minimize contact.

8.2.4. Hand protection: Impermeable gloves to prevent skin contact.

9. Physical and chemical properties

9.1. Information on basic physical and chemicals properties

9.1.1. Physical state	:	Liquid
9.1.2. Color	:	Light yellow to light brown
9.1.3. Odor	:	Typical papain odour
9.1.4. pH	:	4,6 to 6,4
9.1.5. Melting points (° C)	:	Not available
9.1.6. T ° initial boiling (° C)	:	Not available

9.2. Other information : Soluble in water. Solvent content : 0%.

10. Stability and reactivity

10.1 Reactivity: To our knowledge, the product does not present any particular risk.

10.2. Chemical stability: No decomposition if used according to specifications.

10.3. Possibility of hazardous reaction: No dangerous reactions known.

10.4. Conditions to avoid: No further relevant information available.

10.5. Incompatible materials: No further relevant information available.

10.6. Hazardous decomposition products: No dangerous decomposition products known.

11. Toxicological information

Recognized as safe by the FDA; GRAS status (Generally Regarded AS Safe).

11.1 Information on toxicological effects

11.1.1 Acute toxicity

LD50 oral rat : > 4000 mg/kg

LD50 oral mouse : 12500 mg/kg.

11.1.2 Other toxic effects on Humans

Primary irritant effect:

On the skin : irritant to skin.

On the eye : irritant effect.

After inhalation:

Irritant to skin and mucous membranes.

After ingestion:

Slightly hazardous.

11.2 Chronic toxicity

Carcinogenicity: No component of this product present at levels greater than or equal to 0,1% is identified as probable, possible or confirmed human carcinogen by IARC.

Sensitization: May cause sensitization by inhalation. Once sensitized, an allergic reaction may occur when subsequently exposed to very low levels.



Mutagenic effects: No further relevant information available.

Reproductive effects: No further relevant information available.

Developmental effects: No further relevant information available.

12. Ecological information

Generally not hazardous for water and environment.

12.1. Toxicity	:	No data available.
12.2. Persistence and degradability	:	No data available.
12.3. Bioaccumulative potential	:	No data available.
12.4. Mobility in soil	:	No data available.
12.5. Results of PTB and vPvB assessment	:	No data available.
12.6. Endocrine disrupting properties	:	No data available.
12.7. Other adverse effects	:	No data available.

13. Disposal considerations

13.1. Waste treatment methods: Dispose in accordance with national /local safety regulations.

13.2. Contaminated packaging: Dispose of contents/container in accordance with local/regional/national/ international regulation.

14. Transport information

This product is not a dangerous good according to international regulations for transport.

15. Regulatory information

15.1. Safety, health and environmental regulation/legislation specific for the substance:

EU regulations

Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation):

In accordance with the REACH regulation (EC) 1907/2006, the product does not contain any substances that are considered as subject to listing in annex XIV, inventory of substances requiring authorization.

15.2. Chemical safety assessment : No data available.

16. Others information

The information contained in this Safety Data Sheet, as of the issue date, is believed to be true and correct. However, the accuracy or completeness of this information and any recommendations or suggestions are made without warranty of guarantee. Since the conditions of use are beyond the control of our company, it is the responsibility of the user to determine the conditions of safe use of this product. The information in this sheet does not represent analytical specifications, for which please refer to our technical data sheet.

The format of this enzyme Material Safety Data Sheet complies with the Regulations UE 453/2010, 2020/878, 1272/2008 (CLP) and is recommended by the Association of Manufacturers and Formulators of Enzyme Products 'AMFEP'.