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### MATERIAL SAFETY DATA SHEET (MSDS)

#### PAPAIN (PURE)

#### 1. Identification of the substance/mixture and of the company/undertaking

##### 1.1. Product identifier

Trade name : PAPAIN (PURE)

Product code : P0152500500

Identification of the product : Papain  
CAS No: 9001-73-4  
EC No :232-627-2  
Annex No :647-007-00-0

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

Use : Industrial. For professional use only.

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

Company identification : SUVCHEM  
Chaitanya Tower, 2nd Floor, Office # 206,  
Siddharth Nagar, S.V. Road,  
Goregaon (West), Mumbai - 400062,  
Maharashtra, India.  
Contact: +91 22 28725393 / 94 / 95  
Email ID: info@suvchem.com/care@suvchem.com

##### 1.4. Emergency telephone number

Phone no. : + 91 22 28725393 / 94 / 95 (9:00am - 6:00 pm) [ Office hours ]

#### 2. Hazards identification -DSD

##### 2.1. Classification of the substance or mixture

##### Classification EC 67/548 or EC 1999/45

Classification : Xi; R36/37/38  
Xn ; R42

##### Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)

Health hazards : Specific Target Organ Toxicity - Single exposure - Respiratory tract irritation -  
Category 3 - Warning (CLP : STOT SE 3) H335  
Eye irritation - Category 2A - Warning (CLP : Eye Irrit. 2) H319  
Skin irritation - Category 2 - Warning (CLP : Skin Corr. 2) H315  
Respiratory sensitization - Category 1 - Danger (CLP : Resp. Sens. 1) H334

##### 2.2. Label elements

**MATERIAL SAFETY DATA SHEET (MSDS)**
**PAPAIN (PURE)**
**2. Hazards identification -DSD (continued)**
Labelling EC 67/548 or EC 1999/45
**Symbol(s)**

**Symbol(s)**

: Xn : Harmful

**R Phrase(s)**

 : R36/37/38 : Irritating to eyes, respiratory system and skin.  
 R42 : May cause sensitization by inhalation.

**S Phrase(s)**

 : S2 : Keep out of the reach of children.  
 S22 : Do not breathe dust.  
 S24 : Avoid contact with skin.  
 S26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
 S36/37 : Wear suitable protective clothing and gloves.

**Contains**

: Papain

Labelling Regulation EC 1272/2008 (CLP)
**Hazard pictograms**

**Signal words**

: Danger

**Hazard statements**

 : H319 : Causes serious eye irritation.  
 H315 : Causes skin irritation.  
 H334 : May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H335 : May cause respiratory irritation.

**Precautionary statements**
**• General**

 : P102: Keep out of reach of children.  
 P103: Read label before use.  
 P101: If medical advice is needed, have product container or label at hand.

**• Prevention**

 : P285: In case of inadequate ventilation wear respiratory protection.  
 P280: Wear protective gloves, protective clothing, eye protection, face protection.  
 P271: Use only outdoors or in a well-ventilated area.  
 P261: Avoid breathing dust, fume, gas, mist, vapours, spray.  
 P264: Wash thoroughly after handling.

**• Response**

 : P302+P352: IF ON SKIN : Wash with plenty of soap and water.  
 P332+P313: If skin irritation occurs : Get medical advice.  
 P305+P351+P338: IF IN EYES : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P304+P340: IF INHALED : Remove to fresh air and keep at rest in a position comfortable for breathing.  
 P342+P311: If experiencing respiratory symptoms : Call a POISON CENTER or doctor.  
 P363: Wash contaminated clothing before reuse.

### MATERIAL SAFETY DATA SHEET (MSDS)

#### PAPAIN (PURE)

#### 2. Hazards identification -DSD (continued)

- **Storage** : P403+P233: Store in well-ventilated place. Keep container tightly closed.  
P405: Store locked up.
- **Disposal considerations** : P501: Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
- Contains** : Papain

#### 2.3. Other hazards

- Other hazards** : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

#### 3. Composition/information on ingredients

**Substance / Preparation** : Papain

EC No :232-627-2  
Annex No :647-007-00-0  
Substance.

Substance name	Contents	CAS No	EC No	Annex No	REACH Ref.	Classification
Papain	100 %	9001-73-4	232-627-2	647-007-00-0	----	Xi; R36/37/38 R42  Resp. Sens. 1 _ H334 Eye irrit 2 _ H319 Skin Irrit. 2 _ H315 STOT SE 3 _ H335

Contains no other components or impurities which will influence the classification of the product.

#### 4. First aid measures

##### 4.1. Description of first aid measures

- Inhalation** : If experiencing respiratory symptoms : Call a POISON CENTER or doctor if you feel unwell. Remove to fresh air and keep at rest in a position comfortable for breathing.
- Skin contact** : Specific treatment (see on this label). Get medical advice. If skin irritation occurs : Wash contaminated clothing before reuse. Wash with plenty of soap and water.
- Eye contact** : If eye irritation persists : Get medical advice. Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes.
- Ingestion** : Obtain emergency medical attention. Rinse mouth. Do NOT induce vomiting.

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

- Symptoms relating to use** : Causes serious eye irritation.  
Causes skin irritation.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation.

## MATERIAL SAFETY DATA SHEET (MSDS)

### PAPAIN (PURE)

#### 4. First aid measures (continued)

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

**General information** : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

#### 5. Fire-fighting measures

##### 5.1. Extinguishing media

**Suitable extinguishing media** : Foam. Dry powder. Carbon dioxide. Water spray. Sand.  
**Unsuitable extinguishing media** : Do not use a heavy water stream.  
**Surrounding fires** : Use water spray or fog for cooling exposed containers.

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

**Hazardous combustion products** : Under fire conditions, hazardous fumes will be present.

##### 5.3. Advice for fire-fighters

**Protection against fire** : Do not enter fire area without proper protective equipment, including respiratory protection.  
**Special procedures** : Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

#### 6. Accidental release measures

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

**For emergency responders** : Equip cleanup crew with proper protection.  
 Ventilate area.  
**For non-emergency personnel** : Evacuate unnecessary personnel.

##### 6.2. Environmental precautions

**Environmental precautions** : Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

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

**Clean up methods** : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Store away from other materials. Collect spillage.

##### 6.4. Reference to other sections

**MATERIAL SAFETY DATA SHEET (MSDS)**
**PAPAIN (PURE)**
**6. Accidental release measures (continued)**

See section 8. Exposure controls/personal protection

**7. Handling and storage**
**7.1. Precautions for safe handling**

<b>Handling</b>	: Wash thoroughly after handling. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid breathing dust, fume, gas, mist, vapours, spray.
<b>Technical protective measures</b>	: Provide good ventilation in process area to prevent formation of vapour.
<b>Special precautions</b>	: Avoid breathing dust, fume, gas, mist, vapours, spray.

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

<b>Storage</b>	: Keep only in the original container in a cool, well ventilated place. Keep container tightly closed.
<b>Storage - away from</b>	: Strong bases. Strong acids. Sources of ignition. Direct sunlight.

**7.3. Specific end use(s)**

**Specific end use(s)** : None.

**8. Exposure controls/personal protection**
**8.1. Exposure controls**

<b>Personal protection</b>	: Avoid all unnecessary exposure.
• <b>Respiratory protection</b>	: In case of inadequate ventilation wear respiratory protection.
• <b>Hand protection</b>	: Wear protective gloves.
• <b>Skin protection</b>	: Wear suitable protective clothing.
• <b>Eye protection</b>	: Chemical goggles or safety glasses.
• <b>Others</b>	: When using, do not eat, drink or smoke.

**8.2. Control parameters**

**Occupational Exposure Limits** : No data available.

**9. Physical and chemical properties**
**9.1. Information on basic physical and chemical properties**

**MATERIAL SAFETY DATA SHEET (MSDS)**
**PAPAIN (PURE)**
**9. Physical and chemical properties (continued)**

Physical state at 20 °C	: Solid.
Colour	: Off white powder
Odour	: N/A
Odour threshold	: No data available.
pH value	: No data available.
Melting point [°C]	: No data available.
Decomposition point [°C]	: N/A
Critical temperature [°C]	: N/A
Auto-ignition temperature [°C]	: N/A
Flammability (solid, gas)	: N/A
Flash point [°C]	: N/A
Boiling point [°C]	: N/A
Initial boiling point [°C]	: N/A
Final boiling point [°C]	: N/A
Evaporation rate	: N/A
Vapour pressure [20°C]	: N/A
Vapour pressure mm/Hg	: N/A
Vapour density	: N/A
Density [g/cm <sup>3</sup> ]	: N/A
Relative density, gas (air=1)	: N/A
Relative density, liquid (water=1)	: N/A
Solubility in water [% weight]	: Soluble in water
Solubility in water	: N/A
Log Pow octanol / water at 20°C	: No data available.
Solubility	: N/A
Viscosity at 40°C [mm <sup>2</sup> /s]	: N/A

**9.2. Other information**

Explosive properties	: N/A
Explosion limits - upper [%]	: N/A
Explosion limits - lower [%]	: N/A
Oxidising properties	: No data available.

**10. Stability and reactivity**
**10.1. Reactivity.**

Reactivity	: Not established.
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**MATERIAL SAFETY DATA SHEET (MSDS)**
**PAPAIN (PURE)**
**10. Stability and reactivity (continued)**
**10.2. Chemical stability**

**Chemical stability** : Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**

**Hazardous reactions** : Not established.

**10.4. Conditions to avoid**

**Conditions to avoid** : Direct sunlight. Extremely high or low temperatures.

**10.5. Incompatible materials**

**Materials to avoid** : Strong acids. Strong bases.

**10.6. Hazardous decomposition products**

**Hazardous decomposition products** : Fumes. Carbon monoxide. Carbon dioxide.

**11. Toxicological information**
**11.1. Information on toxicological effects**
**Acute toxicity**

- **Inhalation** : Based on available data, the classification criteria are not met.
- **Dermal** : Based on available data, the classification criteria are not met.
- **Ingestion** : Based on available data, the classification criteria are not met.

**Corrosion** : Based on available data, the classification criteria are not met.

**Irritation** : Causes serious eye irritation.  
 Causes skin irritation.  
 May cause respiratory irritation.

**Sensitization** : May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Mutagenicity** : Based on available data, the classification criteria are not met.

**Carcinogenicity** : Based on available data, the classification criteria are not met.

**Toxic for reproduction** : Based on available data, the classification criteria are not met.

**STOT-single exposure** : Based on available data, the classification criteria are not met.

**STOT-repeated exposure** : Based on available data, the classification criteria are not met.

**Aspiration hazard** : Based on available data, the classification criteria are not met.

**MATERIAL SAFETY DATA SHEET (MSDS)**
**PAPAIN (PURE)**
**12. Ecological information**
**12.1. Toxicity**

Toxicity information : Not established.

**12.2. Persistence - degradability**

Persistence - degradability : Biodegradable.

**12.3. Bioaccumulative potential**

Bioaccumulative potential : Not established.

**12.4. Mobility in soil**

Mobility in soil : Not established.

**12.5. Results of PBT and vPvB assessment**

Results of PBT and vPvB assessment : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

**12.6. Other adverse effects**

Environmental precautions : Avoid release to the environment.

**13. Disposal considerations**
**13.1. Waste treatment methods**

General : Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.  
 Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

**14. Transport information**
**14.1. Land transport (ADR-RID)**

General information : Not regulated.

**14.2. Sea transport (IMDG), [English only]**

General information : Not regulated.



**MATERIAL SAFETY DATA SHEET (MSDS)**

**PAPAIN (PURE)**

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In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

**DISCLAIMER:**

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