



## SAFETY DATA SHEET

### Papain 49,000 USP/MG

#### 1. Identification

##### Product identifier

Product name Papain 49,000 USP/MG

Product number BP05FTZ005OK

##### Recommended use of the chemical and restrictions on use

Application Ingredient for use in dietary supplements, food supplements, and other nutrition products, as applicable.

Uses advised against No specific uses advised against are identified.

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

Supplier Innophos  
259 Prospect Plains Rd. Bldg A  
Cranbury, NJ 08512  
1-609-495-2495

##### Emergency telephone number

Emergency telephone CHEMTREC  
Within USA and Canada: 1-800-424-9300  
Outside USA and Canada: +1-703-527-3887 (Collect calls accepted)(24/7)

#### 2. Hazard(s) identification

##### Classification of the substance or mixture

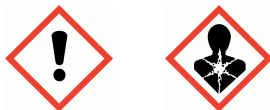
Physical hazards Combustible Dust - USH01

Health hazards Skin Irrit. 2 - H315 Eye Irrit. 2A - H319 Resp. Sens. 1 - H334 STOT SE 3 - H335

Environmental hazards Not Classified

##### Label elements

###### Hazard symbols



Signal word Danger

Hazard statements USH01 May form combustible dust concentrations in air.  
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.



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### Precautionary statements

P261 Avoid breathing dust.  
 P264 Wash contaminated skin thoroughly after handling.  
 P271 Use only outdoors or in a well-ventilated area.  
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
 P284 In case of inadequate ventilation wear respiratory protection.  
 P302+P352 If on skin: Wash with plenty of water.  
 P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.  
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P312 Call a poison center/ doctor if you feel unwell.  
 P321 Specific treatment (see medical advice on this label).  
 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/ doctor.  
 P362+P364 Take off contaminated clothing and wash it before reuse.  
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
 P405 Store locked up.  
 P501 Dispose of contents/ container in accordance with national regulations.

### Contains

Papain

### Other hazards

This product does not contain any substances classified as PBT or vPvB.

## 3. Composition/information on ingredients

### Mixtures

<p><b>Papain</b> 60-100%</p> <p>CAS number: 9001-73-4</p>
<p><b>Classification</b></p> <p>Skin Irrit. 2 - H315            Eye Irrit. 2A - H319            Resp. Sens. 1 - H334            STOT SE 3 - H335</p>
<p><b>MALTODEXT (M-100), KOSHER-IP</b> 10-30%</p> <p>CAS number: 9050-36-6</p>
<p><b>Classification</b></p> <p>Combustible Dust - USH01</p>
<p><b>Sodium Metabisulfite</b> 1-5%</p> <p>CAS number: 7681-57-4</p>
<p><b>Classification</b></p> <p>Acute Tox. 4 - H302            Eye Dam. 1 - H318</p>

The full text for all hazard statements is displayed in Section 16.



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**Composition comments** The exact composition and or concentration has been withheld as a trade secret per OSHA 29 CFR 1910.1200.

### 4. First-aid measures

#### Description of first aid measures

<b>General information</b>	Get medical attention immediately. Show this Safety Data Sheet to the medical personnel.
<b>Inhalation</b>	Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place. In the event of any sensitization symptoms developing, ensure further exposure is avoided.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.
<b>Skin Contact</b>	Brush off loose particles from skin. Rinse with water.
<b>Eye contact</b>	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes.
<b>Protection of first aiders</b>	First aid personnel should wear appropriate protective equipment during any rescue. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

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

<b>General information</b>	See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
<b>Inhalation</b>	May cause sensitization or allergic reactions in sensitive individuals. A single exposure may cause the following adverse effects: Irritation of nose, throat and airway. Difficulty in breathing. Coughing.
<b>Ingestion</b>	May cause irritation.
<b>Skin contact</b>	Redness. Irritating to skin.
<b>Eye contact</b>	Irritating to eyes.

#### Indication of immediate medical attention and special treatment needed

**Notes for the doctor** Treat symptomatically. May cause sensitization or allergic reactions in sensitive individuals.

### 5. Fire-fighting measures

#### Extinguishing media

<b>Suitable extinguishing media</b>	The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.

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

**Specific hazards** None known.



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**Hazardous combustion products** Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

### Advice for firefighters

#### Protective actions during firefighting

Avoid breathing fire gases or vapors. Evacuate area. Keep upwind to avoid inhalation of gases, vapors, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

#### Special protective equipment for firefighters

Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

#### Personal precautions

No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material. Avoid inhalation of dust. Use suitable respiratory protection if ventilation is inadequate.

### Environmental precautions

#### Environmental precautions

Avoid discharge into drains or watercourses or onto the ground.

### Methods and material for containment and cleaning up

#### Methods for cleaning up

Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Collect spillage with a shovel and broom, or similar and reuse, if possible. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.

#### Reference to other sections

For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

## 7. Handling and storage

### Precautions for safe handling

#### Usage precautions

Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep container tightly sealed when not in use. Avoid handling which leads to dust formation. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

#### Advice on general occupational hygiene

Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

### Conditions for safe storage, including any incompatibilities

#### Storage precautions

Store away from incompatible materials (see Section 10). Store locked up. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Utilize retaining walls to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent.



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**Storage class** Chemical storage.

### Specific end uses(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.

## 8. Exposure controls/Personal protection

### Control parameters

#### Occupational exposure limits

Long-term exposure limit (8-hour TWA): OSHA 15 mg/m<sup>3</sup> Total Dust (Particulate Not Otherwise Regulated-PNOR)

Long-term exposure limit (8-hour TWA): OSHA 5 mg/m<sup>3</sup> Respirable Fraction (Particulate Not Otherwise Regulated-PNOR)

#### Sodium Metabisulfite

Long-term exposure limit (8-hour TWA): ACGIH 5 mg/m<sup>3</sup>

A4

ACGIH = American Conference of Governmental Industrial Hygienists.

A4 = Not Classifiable as a Human Carcinogen.

OSHA = Occupational Safety and Health Administration.

### Exposure controls

#### Protective equipment



#### Appropriate engineering controls

Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimize worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimize exposure.

#### Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with OSHA 1910.133. Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

#### Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and be demonstrated to be impervious to the chemical and resist degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

#### Other skin and body protection

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

#### Hygiene measures

Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.



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<b>Respiratory protection</b>	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with OSHA 1910.134. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134.
<b>Environmental exposure controls</b>	Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### 9. Physical and chemical properties

#### Information on basic physical and chemical properties

Appearance	Solid. (Powder.)
Color	Off White ~ Tan
Odor	Characteristic.
Odor threshold	Not available.
pH	4.8-6.2
Melting point	Not available.
Initial boiling point and range	Not available.
Flash point	Not applicable.
Evaporation rate	Not applicable.
Evaporation factor	Not applicable.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	Not available.
Other flammability	Not available.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	Not available.
Bulk density	Not available.
Solubility(ies)	Not available.
Partition coefficient	Not available.
Auto-ignition temperature	Not available.
Decomposition Temperature	Not available.
Viscosity	Not applicable.
Explosive properties	Not available.



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**Explosive under the influence of a flame** Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.

**Oxidizing properties** Not applicable.

### 10. Stability and reactivity

**Reactivity** See the other subsections of this section for further details.

**Stability** Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

**Possibility of hazardous reactions** No potentially hazardous reactions known.

**Conditions to avoid** Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.

**Materials to avoid** Oxidizing materials.

**Hazardous decomposition products** Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

### 11. Toxicological information

#### Information on toxicological effects

##### Acute toxicity - oral

**Summary** Based on available data the classification criteria are not met.

**ATE oral (mg/kg)** 50,000.0

##### Acute toxicity - dermal

**Summary** Based on available data the classification criteria are not met.

##### Acute toxicity - inhalation

**Summary** Based on available data the classification criteria are not met.

##### Skin corrosion/irritation

**Summary** Causes skin irritation.

##### Serious eye damage/irritation

**Summary** Causes serious eye irritation.

##### Respiratory sensitization

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

##### Skin sensitization

**Summary** Based on available data the classification criteria are not met.

##### Germ cell mutagenicity



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Summary	Based on available data the classification criteria are not met.
Carcinogenicity Summary	Based on available data the classification criteria are not met.
IARC carcinogenicity	None of the ingredients are listed or exempt.
Reproductive toxicity Summary	Based on available data the classification criteria are not met.
Specific target organ toxicity - single exposure Summary	May cause respiratory irritation.
Target organs	Respiratory system, lungs
Specific target organ toxicity - repeated exposure Summary	Based on available data the classification criteria are not met.
Aspiration hazard Summary	Not relevant. Solid.
General information	Dust may irritate the eyes and the respiratory system. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	May cause sensitization or allergic reactions in sensitive individuals. A single exposure may cause the following adverse effects: Irritation of nose, throat and airway. Difficulty in breathing. Coughing.
Ingestion	May cause irritation.
Skin Contact	Redness. Irritating to skin.
Eye contact	Irritating to eyes.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target Organs	Respiratory system, lungs

## 12. Ecological information

Ecotoxicity	Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.
Acute aquatic toxicity Summary	Based on available data the classification criteria are not met.
Chronic aquatic toxicity Summary	Based on available data the classification criteria are not met.
<b>Persistence and degradability</b>	
Persistence and degradability	The degradability of the product is not known.
<b>Bioaccumulative potential</b>	
Bio-Accumulative Potential	No data available on bioaccumulation.
Partition coefficient	Not available.
<b>Mobility in soil</b>	





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**Mobility** No data available.

### Other adverse effects

Other adverse effects None known.

## 13. Disposal considerations

### Waste treatment methods

#### General information

The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

#### Disposal methods

Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

## 14. Transport information

### UN Number

UN No. (DOT) Not applicable.

### UN proper shipping name

Proper shipping name (DOT) Not applicable.

### Transport hazard class(es)

#### DOT transport labels

No transport warning sign required.

### Packing group

DOT packing group Not applicable.

### Special precautions for user

DOT reportable quantity Not applicable.

DOT TIH Zone Not applicable.

## 15. Regulatory information

**Regulatory References** OSHA Hazard Communication Standard 29 CFR §1910.1200

### US Federal Regulations

**SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities**

None of the ingredients are listed.

**CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)**

None of the ingredients are listed.



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### [SARA Extremely Hazardous Substances EPCRA Reportable Quantities](#)

None of the ingredients are listed.

### [SARA 313 Emission Reporting](#)

None of the ingredients are listed.

### [CAA Accidental Release Prevention](#)

None of the ingredients are listed.

### [FDA - Essential Chemical](#)

None of the ingredients are listed or exempt.

### [FDA - Precursor Chemical](#)

None of the ingredients are listed or exempt.

### [SARA \(311/312\) Hazard Categories](#)

Combustible Dust  
Respiratory or skin sensitization  
Serious eye damage or eye irritation  
Skin corrosion or irritation  
Specific target organ toxicity (single or repeated exposure)

### [OSHA Highly Hazardous Chemicals](#)

None of the ingredients are listed.

### [US State Regulations](#)

#### [California Proposition 65 Carcinogens and Reproductive Toxins](#)

None of the ingredients are listed or exempt.

#### [California Air Toxics "Hot Spots" \(A-I\)](#)

None of the ingredients are listed.

#### [California Air Toxics "Hot Spots" \(A-II\)](#)

None of the ingredients are listed.

#### [California Directors List of Hazardous Substances](#)

The following ingredients are listed:

*Sodium Metabisulfite*

#### [Massachusetts "Right To Know" List](#)

The following ingredients are listed:

*Sodium Metabisulfite*

#### [Rhode Island "Right To Know" List](#)

The following ingredients are listed:

*Sodium Metabisulfite*

#### [Minnesota "Right To Know" List](#)

The following ingredients are listed:

*Sodium Metabisulfite*

#### [New Jersey "Right To Know" List](#)

The following ingredients are listed:



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### *Sodium Metabisulfite*

#### Pennsylvania "Right To Know" List

The following ingredients are listed:

### *Sodium Metabisulfite*

#### Inventories

##### US - TSCA

All the ingredients are listed or exempt.

##### US - TSCA 12(b) Export Notification

None of the ingredients are listed or exempt.

## 16. Other information

**Abbreviations and acronyms used in the safety data sheet** TDG: The transport of dangerous goods act

IATA: International air transport association.  
 ICAO: Technical instructions for the safe transport of dangerous goods by air.  
 IMDG: International maritime dangerous goods.  
 CAS: Chemical abstracts service.  
 ATE: Acute toxicity estimate.  
 LC<sub>50</sub>: Lethal concentration to 50 % of a test population.  
 LD<sub>50</sub>: Lethal dose to 50% of a test population (median lethal dose).  
 EC<sub>50</sub>: 50% of maximal effective concentration.  
 PBT: Persistent, bioaccumulative and toxic substance.  
 vPvB: Very persistent and very bioaccumulative.

#### Classification abbreviations and acronyms

Eye Irrit. = Eye irritation  
 Resp. Sens. = Respiratory sensitisation  
 Skin Irrit. = Skin irritation  
 STOT SE = Specific target organ toxicity-single exposure

#### Training advice

Read and follow manufacturer's recommendations. Only trained personnel should use this material.

#### Issued by

Innophos

#### Revision date

9/20/2021

#### Revision

2

#### Supersedes date

8/31/2021

#### Hazard statements in full

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.  
 USH01 May form combustible dust concentrations in air.

\*This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to determine the suitability of such information for the user's own particular use, and for ensuring that all such uses and applications (including user's labeling of its products) comply with applicable law.