



Infosafe No™	1CHAA	Issue Date : July 2016	RE-ISSUED by CHEMSUPP
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Product Name : **PEPSIN**

Classified as hazardous

1. Identification

GHS Product Identifier PEPSIN

Company Name CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)

Address 38 - 50 Bedford Street GILLMAN
SA 5013 Australia

Telephone/Fax Number Tel: (08) 8440-2000
Fax: (08) 8440-2001

Recommended use of the chemical and restrictions on use Medicine (digestive ferment), substitute for rennet in cheese making and laboratory reagent.

Other Names	Name	Product Code
	PEPSIN 1:3000 LR	PL391
	PEPSIN 1:2500 LR	PL082
	Pepsinum	
	Puerzym	

Other Information EMERGENCY CONTACT NUMBER: +61 08 8440 2000
Business hours: 8:30am to 5:00pm, Monday to Friday.

Chem-Supply Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Chem-Supply Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Chem-Supply Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification of the substance/mixture Eye Damage/Irritation: Category 2A
Skin Corrosion/Irritation: Category 2
Sensitization - Respiratory: Category 1
Specific target organ toxicity- Single Exposure Category 3 (respiratory tract irritation)

Signal Word (s) DANGER

Hazard Statement (s) 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.

Pictogram (s) Health hazard, Exclamation mark



Precautionary statement – Prevention P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement – Response Skin
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
Inhaled
P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.



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Precautionary statement – Storage	Eyes P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/attention.
Precautionary statement – Disposal	P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. P501 Dispose of contents/container to an approved waste disposal plant.

3. Composition/information on ingredients

Chemical	Solid				
Characterization					
Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>	<u>Hazard Symbol</u>	<u>Risk Phrase</u>
	Pepsin	9001-75-6	100 %		
Other Information	Activity (Approx.): Not less than 2500 units/mg.				

4. First-aid measures

Inhalation	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Immediately obtain medical aid if cough or other symptoms appear.
Ingestion	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.
Skin	Wash with plenty of soap and water. Remove contaminated clothing and wash before re-use. If irritation occurs seek medical advice.
Eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek medical attention.
First Aid Facilities	Maintain eyewash fountain and safety shower in work area.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of the patient.
Other Information	For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor.

5. Fire-fighting measures

Hazards from Combustion Products	Nitrogen oxides, carbon monoxide, carbon dioxide.
Specific Methods	Use extinguishing media most appropriate for the surrounding fire. No limitations to the type of extinguishing media. Small fire: Use dry chemical, CO ₂ , water spray or foam. Large fire: Use water spray, fog or foam. If safe to do so, move undamaged containers from the fire area. Cool containers with flooding quantities of water until well after the fire is out.
Specific hazards arising from the chemical	May burn but do not ignite readily. Runoff may pollute waterways. Fire may produce irritating, poisonous and/or corrosive fumes.
Decomposition Temp.	> 50 °C (denaturation)
Precautions in connection with Fire	Wear SCBA and structural firefighter's uniform.

6. Accidental release measures

Personal Precautions	Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.
Personal Protection	Wear protective clothing specified for normal operations (see Section 8)
Clean-up Methods - Small Spillages	Sweep up (avoid generating dust) and using clean non-sparking tools transfer to a clean, suitable, clearly labelled container for disposal in accordance with local regulations.

7. Handling and storage



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Precautions for Safe Handling Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Avoid ingestion. Use with adequate ventilation. Work under hood. Ground all equipment containing material. Wear suitable protective clothing. Wash clothing before reuse. If you feel unwell, seek medical attention and show the label when possible.

Conditions for safe storage, including any incompatibilities Keep in a tightly closed container, stored in a cool, dry, odour-free, ventilated area where normal temperatures do not exceed 30 °C and relative humidity is not more than 70%. Protect against physical damage.

8. Exposure controls/personal protection

Other Exposure Information A time weighted average (TWA) concentration for an 8 hour day, and 5 day week has not been established by Safe Work Australia for this product. There is a blanket limit of 10 mg/m³ for dusts when limits have not otherwise been established.

Appropriate engineering controls In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.

Respiratory Protection Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

Eye Protection The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate.

Hand Protection Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336. Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance. Recommendation: Nitrile rubber gloves

Personal Protective Equipment Final choice of personal protective equipment will depend on individual circumstances and/or according to risk assessments undertaken.

Footwear Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.

Body Protection Flame retardant protective clothing. Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Hygiene Measures Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. Physical and chemical properties

Form Solid

Appearance White to yellowish/white powder.

Odour Slight characteristic odour.

Decomposition Temperature > 50 °C (denaturation)

Melting Point Decomposes.

Solubility in Water Slightly soluble in water (~10 g/l @ 20 °C).

Solubility in Organic Solvents Insoluble in alcohol, chloroform and ether.

Specific Gravity 0.5 (Water = 1)

pH 3.5 - 5.0 (10 g/l H₂O (20 °C)); 4.0 - 5.0 (20 g/l H₂O (20 °C)).

Vapour Pressure Negligible.

Evaporation Rate Negligible.

Volatile Component 0 %vol @ 21 °C

Flammability Combustible.

Explosion Properties Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Molecular Weight 34,500



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10. Stability and reactivity

Chemical Stability	Stable under ordinary conditions of use and storage. The activity of pepsin in solution is destroyed by heating above 50 - 70 °C or by alkalies (pepsin is very stable to acid). Dry pepsin is not injured by heating to 100 °C.
Conditions to Avoid	Moisture, heat, flames, ignition sources and incompatibles.
Incompatible Materials	Strong oxidizers, alcohols, strong bases, alkalies, tannins, heavy metal salts.
Hazardous Decomposition Products	Nitrogen oxides, carbon monoxide, carbon dioxide and water.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Ingestion	Large doses may cause gastro-intestinal upset. May cause allergic reaction characterized by a rash.
Inhalation	Irritating to respiratory system. May cause sensitisation by inhalation. May cause asthmatic attacks due to allergic sensitization of the respiratory tract.
Skin	May cause irritation, allergic reaction. May result in reddening, burning sensation.
Eye	Irritating to eyes.
Skin Sensitisation	Risk of skin and lung sensitisation.
Carcinogenicity	Not listed in the IARC Monographs.
Chronic Effects	Possible hypersensitivity, dermatitis.
Serious eye damage/irritation	Irritant effect.
Mutagenicity	Bacterial mutagenicity: Bacillus subtilis: negative. Mutagenic for mammalian somatic cells.
Respiratory Irritation	Irritant effect.
Skin corrosion/irritation	Irritant effect.

12. Ecological information

Ecological Information	No ecological problems are to be expected when the product is handled and used with due care and attention.
Persistence and degradability	Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

13. Disposal considerations

Disposal Considerations	Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.
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14. Transport information

Transport Information	Not classified as a Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.
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15. Regulatory information

Regulatory Information	Listed in the Australian Inventory of Chemical Substances (AICS).
Poisons Schedule	Not Scheduled

16. Other Information

Literature References	'Standard for the Uniform Scheduling of Medicines and Poisons No. 6', Commonwealth of Australia, February 2015. Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997. National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007. Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous
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Safety Data Sheet

infosafe
CS: 1.7.2

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**Contact
Person/Point**

Chemicals', 2011.
Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide',
Standards Australia/Standards New Zealand, 2010.
Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'.
Safe Work Australia, 'Hazardous Substances Information System, 2005'.
Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances
(2011)'.
Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational
Environment [NOHSC:1003(1995)]'.

Paul McCarthy Ph. (08) 8440 2000 **DISCLAIMER STATEMENT:**

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**Empirical Formula &
Structural Formula**

Protein with a peptide sequence of 327 amino acid residues.

...End Of MSDS...

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