

Material Safety Data Sheet.

1. IDENTIFICATION

Product Identifier: Liquid Pepsin
Other Means of Identification: EC 3.4.23.1
Synonyms: Pepsin A
Chemical Family: Proteolytic digestive enzymes
CAS Number: 9001-75-6
Recommended Use: Laboratory chemicals
Restrictions on Use: No data available
Initial Supplier Identifier: Gurvey & Berry Co. Inc.
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Toronto, ON, Canada, M8Z 5T6
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2. HAZARD IDENTIFICATION

GHS Classification in accordance with Hazardous Products Regulations (HPR) OR/2015-17)

Hazard class	Hazard category	Hazard statement
Skin corrosion/irritation	3	H316
Serious eye damage/eye irritation	2B	H320
Sensitization - skin.	1B	H317
Sensitization - respiratory	1B	H334



Pictograms:

Signal word:

Warning!

Danger!

Hazard statements

H316 Causes mild skin irritation.

H320 Causes eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if fumes/vapours are inhaled.

H317 May cause an allergic skin reaction.

Precautionary statements – prevention.

P261 Avoid breathing fumes, mist, or vapours.
P264 Wash hands, skin, and contaminated clothing thoroughly after handling.
P280 Wear protective gloves/clothing, eye/face protection, and respiratory protection.
P272 Contaminated work clothing should not be allowed out of the workplace.
P284 Wear respiratory protection.
Refer to section 8 of the SDS.

Precautionary statements – response

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342 + P316 If experiencing respiratory symptoms: Get emergency medical help immediately.
P302+P352 IF ON SKIN: Wash with plenty of water and soap.
P333+P317 If skin irritation or rash occurs: Get medical help.
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+P317 If eye irritation persists: Get medical help.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Any person who experiences any allergic or sensitive reactions to this powder should refrain from handling it again.

Precautionary statements - storage

P233 Keep container tightly closed.

Precautionary statements - disposal

P501 Dispose of contents/container to an approved disposal plant and in accordance with local, provincial, federal regulations.

Hazards not otherwise classified (HNOC) or not covered by GHS.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration	Common name / Synonyms
Pepsin	9001-75-6	% by weight: 10 — 30%	See section 1
Glycerin	56-81-5	% by weight: 5 — 50%	
Water	7732-18-5	% by weight: Remainder	

Notes:

4. FIRST-AID MEASURES

First aid measures by route of exposure:

- General:** Avoid breathing fumes, mist or vapours.
Wash hands, skin, and contaminated clothing thoroughly after handling.
Do not eat, drink, or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/clothing, respiratory and eye/face protection.
- After Skin Contact:** Wash with plenty of water and soap. Remove contaminated clothes and wash before reuse. If skin irritation occurs: Get medical help.
- After Ingestion:** Rinse mouth and throat. Give a glass of water to drink. Get medical help.
- After Inhalation:** Remove person to fresh air and keep comfortable for breathing.
If experiencing respiratory symptoms: Get emergency medical help immediately.
- After Eye Contact:** Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists, get medical help.
Do not allow victim to rub eyes or keep them closed.
- First aid Advice:** **Any person who experiences any allergic or sensitive reactions to this powder should refrain from handling it again.**

Most Important Symptoms and Effects, Acute and Delayed:

Symptoms/effects after inhalation of fumes:

Symptoms of allergic reaction such as wheezing, coughing, sneezing, chest tightness. Faster breathing and fast heartbeat. Drowsiness, confusion, tiredness, dizziness, and fainting. Blue lips or fingers.

Symptoms/effects after skin contact: Skin irritation, rash, itchiness. Respiratory reaction is also possible with hypersensitive individuals.

Symptoms/effects after eye contact: Dust can cause eye irritation. Symptoms include stinging, tearing, redness, and swelling of the eyes. Respiratory reaction is also possible with hypersensitive individuals.

Symptoms/effects after ingestion: Respiratory reaction is also possible with hypersensitive individuals.

Medical Conditions Aggravated

By Exposure: Pre-existing allergic respiratory conditions

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

In case of fire use water mist, dry chemical, chemical foam, or carbon dioxide.

Unsuitable Extinguishing Media: Do not use water jet or water.

Special Hazards Arising from the Product:

May cause allergic respiratory reaction.

Special Protective Equipment and Precautions for Fire-Fighters:

As in any fire, wear a self-contained breathing apparatus and full protective gear.

During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Further information. May cause allergic respiratory reaction.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures:

Communicate hazard.

Evacuate unprotected personnel to safe areas.

Wear personal protective equipment. (see section 8).

Remove all sources of ignition.

Ensure adequate ventilation. Avoid breathing fumes and vapours.

Prevent further spill if safe to do so.

Wash hands and contaminating clothes thoroughly with mild soap and water after handling this material.

Methods and materials for containment and cleaning up

Small spill

Wear Personal protective equipment (see section 8).

Prevent further spillage if safe to do so.

Absorb the spill with sorbent pads, vermiculite, dry sand, or earth.

Flush spill area with plenty of water (low pressure) into approved sewer.

Dispose of containers in accordance with local, regional, and federal authority requirement.

Wash contaminated clothing before re-use.

Large spill.

Assess if you can handle the spill.

Get advice from emergency services if necessary.

Wear Personal protective equipment (see section 8).

Prevent further spillage if safe to do so.

Ensure adequate ventilation. Avoid breathing fumes and vapours.

If feasible, collect into designated, labeled, closed waste containers for disposal.

Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Dispose of containers in accordance with local, regional, and federal authority requirement.

Environmental precautions

Do not let product enter drains and ground.

Reference to other sections

See section 1 for emergency contact.

See section 8 for information on appropriate personal protective equipment.

See section 13 for disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling:

Always wear personal protective equipment (see section 8)

Avoid contact with eyes, skin, and clothing.

Avoid ingestion and inhalation.

Use with adequate ventilation.

For precautionary statements see also section 2.2

Wash hands thoroughly after handling.

Do not eat, drink, or smoke in the area.

Conditions for Safe Storage:

Protect from heat, sunlight, and moisture. Store in tightly closed polyliners within a sealed container in an odor-free environment, where normal temperature does not exceed 30C and relative humidity is not more than 70%.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH® TLV®		OSHA PEL	
	TWA	STEL	TWA	STEL
	N/A	N/A	N/A	N/A

Appropriate Engineering Controls: Local and/or general exhaust ventilation is required.
Eyewash station and safety shower required.

Personal Protection Measures (e.g. personal protective equipment):

Eye/face protection Safety glasses with side-shields for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN (EU).

Skin and body protection Full body protective clothing, boots, gloves. Handle with gloves compatible with this material. Gloves must be inspected prior to use.

Respiratory protection Approved /certified respirator, such as aerosol mask in addition to engineering controls. If conditions warrant or for susceptible individuals, use respirator with organic vapour cartridges or a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Refer to NIOSH Criteria Guides to determine appropriate unit.

For spills and/or emergencies of unknown concentrations, an approved self-contained breathing apparatus operated in the pressure demand mode is required.

Control of environmental exposure Do not let product enter drains or ground.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form:	Clear liquid
Color:	Gold/Amber
Molecular Weight:	No data available
Odour:	Characteristic enzyme order
Odour Threshold:	No data available
pH:	3.0-4.5
Melting Point/freezing point:	No data available
Initial boiling point/boiling range:	No data available
Flash Point:	No data available
Evaporation Rate:	No data available
Flammability (solid; gas):	Not flammable
Upper flammability or explosive limits	No data available
Lower flammability or explosive limits	No data available
Vapor Pressure (mmHg):	No data available
Vapor Density (air=1):	No data available
Relative Density (water=1):	No data available
Solubility in Water:	Soluble
Solubility in Other Agents:	No data available
Partition coefficient (n-octanol/water)	No data available
Autoignition	No data available

Decomposition	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Other information:	

10. STABILITY AND REACTIVITY

Reactivity:	No data available.
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	No data available
Conditions to avoid:	Exposure to heating.
Incompatible materials:	Alcohol, alkalis, tannins, heavy metal salts
Hazardous decomposition products:	formed under fire conditions – Carbon oxides and other toxic fumes.
Other decomposition products	No data available
In the event of fire:	see section 5

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation:	Yes
Skin contact:	Yes
Eye contact:	Yes
Ingestion:	Yes

Acute Toxicity Oral LD₅₀:	No data available
Skin corrosion/irritation:	Skin Irritant Category 3
Serious Eye Damage/irritation:	Eye Irritant Category 2B
Respiratory and/or Skin Sensitization:	Respiratory and skin sensitizer.
Aspiration Toxicity:	No data available
STOT (Specific Target Organ Toxicity)	
Single Exposure:	May cause respiratory allergic reaction.
STOT (Specific Target Organ Toxicity)	
Repeated Exposure:	No data available
Carcinogenicity:	
IARC	Not listed
ACGIH®	Not listed
OSHA	Not listed
Reproductive Toxicity:	No data available
Germ Cell Mutagenicity:	No data available
Interactive Effects	No data available
Additional Information	No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity:

No data available

Persistence and degradability:

Product is readily biodegradable.

Bioaccumulative potential:

No data available.

Mobility in soil:

No data available

Other adverse effects:

13. DISPOSAL CONSIDERATIONS

Wastes of Residues:

Package product wastes.

Close and label the waste receptacles and any unclean empty containers.

Dispose of according to local, provincial, and federal regulations.

Contaminated Packaging:

Do not reuse containers. Dispose of as unused product.

14. TRANSPORT INFORMATION

Not dangerous goods for transport. Keep separated from foodstuffs.

15. REGULATORY INFORMATION

CANADA DSL/NDSL: Pepsin A CAS # 9001-75-6 s listed on the DSL.

This information is based upon knowledge currently available.

More detailed information on the physical and chemical properties can be requested from the supplier. To the best of our knowledge, the information contained herein is accurate and complete. However, this should not be construed to imply any warranty or guarantee. Gurvey & Berry Co. Inc. shall not be held liable for any damage resulting from handling or from contact with the above chemical.

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This document will only be updated as needed.