Peptide Institute, Inc.

7-2-9 Saito-Asagi, Ibaraki-Shi, Osaka 567-0085, Japan

Safety Data Sheet (SDS)

1. PRODUCT AND COMPANY IDENTIFICATION

Catalog Code Number: 3085
Product Name: β-Alanyl-L-Histidine [Carnosine]
Supplier's Name: Peptide Institute, Inc.
Address: 7-2-9 Saito-Asagi, Ibaraki-Shi, Osaka 567-0085, Japan
Phone Number: 81-72-643-4411
Fax Number: 81-72-643-4422
Recommended uses: Reagent
Restrictions on use: Seek expert judgment as necessary.
Creation Date: March 25, 2013
Revised: December 12, 2025 (ver.5)

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS classification

HEALTH HAZARDS

ACUTE TOXICITY: ORAL Not classified

Other hazards: No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Single Substance or Mixture: Single Substance
Common Chemical Name, Common Name or Substance Name: β-Alanyl-L-Histidine
Synonym: Carnosine
Molecular Formula: $C_9H_{14}N_4O_3$ (M.W. 226.23)
CAS Registry Number: 305-84-0
EINECS No.: 206-169-9
UN No. & Hazard Class: This material is not classified as hazardous goods.

4. FIRST AID MEASURES

Inhalation: If inhaled, Immediately remove to fresh air and get medical attention immediately.

Skin contact:

In case of skin contact, take off contaminated clothing immediately, rinse with soap or detergent and plenty of water for at least 15 minutes and get medical attention. When reusing contaminated clothing, wash it.

Eye contact:

In case of contact with eyes, immediately flush with tap water or dilute saline for at least 15 to 20 minutes, occasionally opening the eyelids, and seek medical attention from an ophthalmologist.

Ingestion:

If swallowed, keep the airway open and vomit, and get medical attention if you feel unwell. Do not induce vomiting.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing media:

Water mist, powder fire extinguishing agent, carbon dioxide, foam extinguishing agent etc.

Unsuitable Extinguishing media: No information

Special extinguishing method: Complies with fire extinguishing method in normal fire.

Specific hazards arising from the chemical product:

Be careful as it may be decomposed by burning or high temperature and harmful nitrogen oxides may be generated.

Protection of fire extinguishers:
Firefighting work is done from the windward side and, in some cases, wear protective gear so as not to inhale combustion gas.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:
Always wear protective equipment to prevent exposure.
Protective equipment and emergency measures:
Wear long-sleeved work clothes, protective gloves, protective mask and eye protection so as not to touch the eyes and skin directly.
Environmental precautions:
In order to prevent discharge into the public water area or underground penetration, the floor surface etc. where this product spills should not be washed away with water.
Recovery, Neutralization:
The solids are swept up and collected. If it is small, wipe it with a cloth. In the case of large quantities, take measures such as spill prevention by filling and transfer to new containers.
Methods and materials for contaminant and methods and materials for cleaning up:
The spilled material is scooped or swept up and collected in a paper bag or drum or the like.

7. HANDLING AND STORAGE

Handling:
Technical measures:
Wear long-sleeved work clothes, protective gloves, protective mask and eye protection so as not to touch the eyes and skin directly. Encourage people to gargle and wash face and hands after handling.
Local exhaust and general ventilation:
It is desirable to use a local exhaust system or carry out appropriate exhaust.
Precautions for safe handling:
Avoid fire and avoid contact with hot substances, strong oxidants, sparks and open flames.
Storage:
Condition for safe storage: Keep container tightly closed. Store in a cool dry place.
Recommended storage temperature: 2-10 °C.
Container and packaging materials for safe handling: No data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls:
1. Install a local exhaust system. Use explosion-proof exhaust if dust, vapor or fumes become explosive in concentration.
2. Provide safety shower, hand wash and eyewash facilities near the handling area and clearly indicate the location.

Exposure limits: No data available
Concentration standard values under Japanese Safety and Health Act: No data available
Personal protective equipment:
Wear a dust mask, goggle-type protective glasses, protective gloves, rubber gloves, long-sleeved protective clothing, protective boots, etc. as necessary.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid (powder)
Color: White
Odor: No data available
Melting point/freezing point: No data available
Boiling point or initial boiling point and boiling range: No data available

Flammability: No data available
Lower and upper explosion limit/flammability limit: No data available
Flash point: No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
pH: No data available
Kinematic viscosity: No data available
Solubility: Soluble in H_2O
***n*-Octanol/water partition coefficient:** No data available
Vapor pressure: No data available
Density and/or relative density: No data available
Relative vapor density: No data available
Particle characteristics: No data available

10. STABILITY AND REACTIVITY

Stability: It is considered stable in normal storage and handling.
Reactivity: No data available
Chemical stability: No data available
Possibility of hazardous reactions: No data available
Conditions to avoid: No data available
Incompatible materials: No data available
Hazardous decomposition products: No data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity: LD_{50} (*p.o.* mouse): >14,930 mg/kg[5),6)] (REGISTRY)
LD_{50} (*i.v.* mouse): 9,087 mg/kg[7)] (REGISTRY)
Skin irritation/corrosion: No data available
Serious eye damage/ irritation: No data available
Respiratory or skin sensitization: No data available
Reproductive cell mutagenicity: No data available
Carcinogenicity: No data available
Reproductive toxicity: TDLo (*i.p.* rat): 21 mg/kg[8)]
(8-14 days pregnancy, mortality after implantation: number of offspring; embryo death)
STOT-single exposure: No data available
STOT-repeated exposure: No data available
Aspiration hazard: No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity: No data available
Persistence and degradability: No data available

Bioaccumulative potential:

Bio-concentration factor:

Calculated using Advanced Chemistry Development (ACD/Labs) Software V9.04 (REGISTRY)

VALUE	CONDITION	TYPE
1	pH 1 Temp: 25°C	Predicted
1	pH 2 Temp: 25°C	Predicted
1	pH 3 Temp: 25°C	Predicted
1	pH 4 Temp: 25°C	Predicted
1	pH 5 Temp: 25°C	Predicted
1	pH 6 Temp: 25°C	Predicted
1	pH 7 Temp: 25°C	Predicted
1	pH 8 Temp: 25°C	Predicted
1	pH 9 Temp: 25°C	Predicted
1	pH 10 Temp: 25°C	Predicted

Mobility in soil: No data available

Hazards to ozone layer: No data available

13. DISPOSAL CONSIDERATIONS

Information on the safe and environmentally sound disposal or recycling of chemicals and contaminated containers and packaging:

Obey local/national regulations.

14. TRANSPORT INFORMATION

UN number and UN classification: This material is not classified as hazardous goods.

Regulatory information if there are Japanese regulations: Not applicable.

15. REGULATORY INFORMATION

Names of applicable Japanese laws and information on regulation based on those laws: Not applicable.

Caution: The chemical, physical and toxicological properties of this product have not been thoroughly investigated. Exercise due care.

16. OTHER INFORMATION

Disclaimer: NOT FOR USE IN HUMANS. For R&D use only. Not for drug, household or other uses.

Reference:

1. JCIA: Japan Chemical Industry Association GHS support Guidelines (September, 2023)
2. JIS Z 7253:2019 Hazard communication of chemicals based on GHS-Labelling and Safety Data Sheet (SDS)
3. NITE: National Institute of Technology and Evaluation (JAPAN) web site
4. Product Safety Data Sheet L-Carnosine (HAMARI PFST, Ltd.)
5. K. Nagai, US Patent #4446149 A (1984).
6. K. Nagai, JP Patent #2221230 A (1990).
7. K. Horisaki, S. Nakayama, M. Okazaki, Y. Miyashita, H. Sakaki, M. Miyasaka, Y. Morimoto, *Showa Igakkai Zasshi*, **34**, 271 (1974).
8. K. Akatsuka, T. Hashimoto, K. Takeuchi, Y. Miyamae, K. Horisaka, *Oyo Yakuri*, **8**, 1219 (1974).