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 Creation Date: March 25, 2013 **Revised:** April 22, 2019 (ver.4)

#### 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 Name:** β-Alanyl-L-Histidine Synonym: Carnosine **Molecular Formula:** C<sub>9</sub>H<sub>14</sub>N<sub>4</sub>O<sub>3</sub> (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.

#### **Eve 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**

Extinguishing media: Water mist, powder fire extinguishing agent, carbon dioxide, foam extinguishing agent etc. **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.

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### 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: Keep container tightly closed. Store in a cool dry place. Recommended Storage 2-10 °C.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### **Engineering controls:**

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

Control concentration: No data available

Allowable concentration: 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

**Appearance and Odor:** White powder **Reactivity in Water:** No reactivity **Solubility:** Soluble in H<sub>2</sub>O

#### **10. STABILITY AND REACTIVITY**

**Stability:** It is considered stable in normal storage and handling. **Reactivity:** No data available **Firing ability:** No data available

#### 11. TOXICOLOGICAL INFORMATION

Acute toxicity: LD<sub>50</sub> (*p.o.* mouse): >14,930 mg/kg<sup>5),6)</sup> (REGISTRY) LD<sub>50</sub> (*i.v.* mouse): 9,087 mg/kg<sup>7)</sup> (REGISTRY)

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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<sup>8)</sup>

(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

#### **13. DISPOSAL CONSIDERATIONS**

Ask an authorized industrial waste disposer with processing capacity. Comply with all applicable laws when disposing of this material.

#### **14. TRANSPORT INFORMATION**

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

#### **15. REGULATORY INFORMATION**

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 (June, 2012)

2. JIS Z7253:2012 Hazard communication of chemicals based on GHS-Labelling and Safety Data Sheet (SDS)

3. NITE: National Institute of Technology and Evaluation (JAPAN) web site

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- 4. Product Safety Data Sheet L-Carnosine CHF (Yonezawa Hamari Chemicals, 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).

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