

## Safety Data Sheet (SDS)

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Catalog Code Number:** 4262-s  
**Product Name:** Gla<sup>17,21,24</sup>-Osteocalcin (Human)  
**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:** January 11, 2015  
**Revised:** December 18, 2018 (ver.2)

### 2. HAZARDS IDENTIFICATION

**Classification of the substance or mixture**  
**GHS classification:** Not a hazardous substance  
**Other hazards:** No data available

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Single Substance or Mixture:** Single Substance  
**Common Name:** Gla<sup>17,21,24</sup>-Osteocalcin (Human)  
**Synonym:** Osteocalcin (Human, Gla<sup>17,21,24</sup>)  
(Ammonium Form)  
**Structure:** Tyr-Leu-Tyr-Gln-Trp-Leu-Gly-Ala-Pro-Val-  
Pro-Tyr-Pro-Asp-Pro-Leu-Gla-Pro-Arg-Arg-  
Gla-Val-Cys-Gla-Leu-Asn-Pro-Asp-Cys-Asp-  
Glu-Leu-Ala-Asp-His-Ile-Gly-Phe-Gln-Glu-  
Ala-Tyr-Arg-Arg-Phe-Tyr-Gly-Pro-Val  
(Gla: L-γ-Carboxyglutamic acid)  
(Disulfide bond between Cys<sup>23</sup>-Cys<sup>29</sup>)  
**Molecular Formula:** C<sub>269</sub>H<sub>381</sub>N<sub>67</sub>O<sub>82</sub>S<sub>2</sub> (M.W. 5929.4)  
**Product Description:** Bone Gla Protein  
**CAS Registry Number:** 136461-80-8  
**EINECS No.:** -  
**UN No. & Hazard Class:** This material is not classified as hazardous goods.

### 4. FIRST AID MEASURES

**Inhalation:** If inhaled, remove person to fresh air and keep comfortable for breathing. Wash your mouth and nasal cavity thoroughly with clean water and get medical attention.  
**Skin contact:** In case of skin contact, wash with plenty of water. Call a doctor, if you feel unwell.  
**Eye contact:** In case of contact with eyes, wash with plenty of water. Call a doctor, if you feel unwell.  
**Ingestion:** If swallowed, rinse mouth. Call a doctor, if you feel unwell.

### 5. FIRE FIGHTING MEASURES

**Extinguishing media:** Water spray, carbon dioxide, dry chemical powder, or appropriate form.  
**Special extinguishing method:** Complies with fire extinguishing method in normal fire.  
**Specific hazards arising from the chemical product:**  
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

## 6. ACCIDENTAL RELEASE MEASURES

### **Personal precautions, protective equipment and emergency procedures:**

Wear respirator, chemical safety goggles, rubber boots and heavy rubber gloves.

### **Environmental precautions:**

To be careful not discharged to the environment without being properly handled waste water contaminated.

### **Methods and materials for contaminant and methods and materials for cleaning up:**

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust.

## 7. HANDLING AND STORAGE

**Handling:** Avoid inhalation. Avoid contact with eyes, skin and clothing.

**Storage:** Keep container tightly closed. Store in a cool dry place. Recommended Storage -20 °C.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering controls:** No data available

**Exposure limits:** No data available

### **Personal protective equipment:**

Wear appropriate respirator, chemical-resistant gloves, safety goggles, other protective clothing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance and Odor:** White amorphous powder

**Reactivity in Water:** No reactivity

**Solubility:** Soluble in 0.02% ammonia solution

## 10. STABILITY AND REACTIVITY

**Stability:** No data available

**Reactivity:** No data available

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity:** No data available

**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:** No data available

**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:** No data available

**Mobility in soil:** No data available

## 13. DISPOSAL CONSIDERATIONS

Observe all federal, state and local environmental regulations.

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

# Peptide Institute, Inc.

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## 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-Labeling and Safety Data Sheet (SDS)
3. NITE: National Institute of Technology and Evaluation (JAPAN) web site

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