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: 2716 Product Name: L-Ornithine • HCl 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: November 16, 2015 Revised: May 16, 2019 (ver.2)

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: L-Ornithine • HCl Molecular Formula: C₅H₁₂N₂O₂ • HCl (M.W. 132.16 • 36.46) CAS Registry Number: 3184-13-2 EINECS No.: 221-678-6

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.

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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 Room temperature.

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 crystals or White crystalline powder Reactivity in Water: No reactivity Solubility: Soluble in H₂O Specific optical rotation: $[\alpha]_D$ +22.5° ~ +25.0°

10. STABILITY AND REACTIVITY

Stability: No data available **Reactivity:** No data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity: LD₅₀ (*p.o.* rat): 10 g/kg (RETCS) 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.

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.

SDS No. 2716 L-Ornithine • HCl

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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

4. The Chemical Daily Co., Ltd.: Chemical products of 16112 (2012)

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