

## Safety Data Sheet (SDS)

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Catalog Code Number:** 4227-s  
**Product Name:** Charybdotoxin  
**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:** October 9, 1997  
**Revised:** July 24, 2024 (ver. 6)

### 2. HAZARDS IDENTIFICATION

**Classification of the substance or mixture**

**GHS classification** Not a hazardous substance

**Other hazards:** May be fatal if enters bloodstream.

Do not breathe dust.

Do not use if skin is cut or scratched. Wash thoroughly after handling.

The chemical, physical and toxicological properties of this product have not been thoroughly investigated.

Exercise due care.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Single Substance or Mixture:** Single Substance

**Common Chemical Name, Common Name or Substance Name:**

Charybdotoxin

**Synonym:** ChTX

(Scorpion, *Leiurus quinquestriatus hebraeus*)

**Structure:** Pyr-Phe-Thr-Asn-Val-Ser-Cys-Thr-Thr-Ser-

Lys-Glu-Cys-Trp-Ser-Val-Cys-Gln-Arg-Leu-

His-Asn-Thr-Ser-Arg-Gly-Lys-Cys-Met-Asn-

Lys-Lys-Cys-Arg-Cys-Tyr-Ser

(Disulfide bonds between Cys<sup>7</sup>-Cys<sup>28</sup>, Cys<sup>13</sup>-Cys<sup>33</sup>, and Cys<sup>17</sup>-Cys<sup>35</sup>)

**Molecular Formula:** C<sub>176</sub>H<sub>277</sub>N<sub>57</sub>O<sub>55</sub>S<sub>7</sub> (M.W. 4295.9)

**Product Description:** Ca<sup>2+</sup>-activated K<sup>+</sup> Channel Blocker

**CAS Registry Number:** 95751-30-7

**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

**Suitable Extinguishing media:** Water spray, carbon dioxide, dry chemical powder, or appropriate form.

**Unsuitable Extinguishing media:** Nothing special.

**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:**

**Technical measures:** No data available

**Precautions for safe handling:** Avoid inhalation. Avoid contact with eyes, skin and clothing.

**Storage:**

**Condition for safe storage:** Keep container tightly closed. Store in a cool dry place.

**Recommended storage temperature:** -20 °C.

**Container and packaging materials for safe handling:** No data available

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering controls:** No data available

**Exposure limits:** No data available

**Concentration standard values under Japanese Safety and Health Act:** No data available

**Personal protective equipment:**

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

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state:** Solid (amorphous 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<sub>2</sub>O

**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

**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:** 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

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

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