

Safety Data Sheet (SDS)

1. PRODUCT AND COMPANY IDENTIFICATION

Catalog Code Number: 4088-s/4088-v
Product Name: Insulin (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: March 19, 2003
Revised: September 7, 2023 (ver.5)

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 Chemical Name, Common Name or Substance Name: Insulin (Human)
Structure: A-chain:
Gly-Ile-Val-Glu-Gln-Cys-Cys-Thr-Ser-Ile-Cys-Ser-Leu-Tyr-Gln-Leu-Glu-Asn-Tyr-Cys-Asn
B-chain:
Phe-Val-Asn-Gln-His-Leu-Cys-Gly-Ser-His-Leu-Val-Glu-Ala-Leu-Tyr-Leu-Val-Cys-Gly-
Glu-Arg-Gly-Phe-Phe-Tyr-Thr-Pro-Lys-Thr
(Disulfide bonds between Cys^{A6}-Cys^{A11}, Cys^{A7}-Cys^{B7}, and Cys^{A20}-Cys^{B19})
Molecular Formula: C₂₅₇H₃₈₃N₆₅O₇₇S₆ (M.W. 5807.6)
CAS Registry Number: 11061-68-0
EINECS No.: 234-279-7
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:

Peptide Institute, Inc.

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

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

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 0.1% AcOH

***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: LD₅₀ (*s.c.* mouse or rat): > 145 mg/kg

LD₅₀ (*i.v.* mouse or rat): > 145 mg/kg

(*s.c.*: subcutaneous, *i.v.*: intravenous)

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 (June, 2019)
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
4. Pharmaceutical Handbook (Iyakuhin Youran) ver.5, Osaka Hospital Pharmacist Association
5. THE JAPANESE PHARMACOPOEIA SEVENTEENTH EDITION, The Ministry of Health, Labour and Welfare

The above information is furnished without warranty, express or implied, except that it is accurate to the best knowledge of Peptide Institute, Inc. It relates only to the specific product designated herein, and does not relate to use in combination with any other material or in any process. Peptide Institute, Inc. assumes no legal responsibility for use of or reliance upon this information.