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: 1022
Product Name: HOBt
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: Treat this product as a Class 5, Type 1 self-reactive substance under Japan's Fire Service Act.
Creation Date: April 16, 2008
Revised: January 21, 2025 (ver.5)

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS classification

PHYSICAL HAZARDS
EXPLOSIVES Division 1.3
HEALTH HAZARDS
ACUTE TOXICITY: ORAL Not classified
Pictograms

Signal word Danger
Hazard statements
Explosive; fire, blast or projection hazard
Precautionary statements
Prevention
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep only in original container.
Ground and bond container and receiving equipment.
Do not subject to grinding/shock/friction.
Wear protective gloves/protective clothing/eye protection/face protection.
Response
In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches explosives.
Storage
Store in accordance with Japan's Fire Service Act.
Disposal
Dispose of contents/container to an approved waste disposal plant.

Other hazards: No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Single Substance or Mixture: Single Substance
Common Chemical Name, Common Name or Substance Name: 1-Hydroxybenzotriazole
Molecular Formula: $C_6H_5N_3O$ (M.W. 135.12)

CAS Registry Number: 2592-95-2
EINECS No.: 219-989-7
UN No. & Hazard Class: 0508 & 1.3C

4. FIRST AID MEASURES

Inhalation: If inhaled, remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice and treatment.

Skin contact: Immediately wash thoroughly with plenty of soap and water. Remove or take off contaminated clothing and shoes. If skin irritation or rash occurs, seek medical advice and treatment.

Eye contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, seek medical advice and treatment.

Ingestion: Rinse mouth thoroughly with water and immediately seek medical advice and treatment.

Protection for first aiders: Remove contaminated clothing and shoes. Rescue personnel should wear protective gear such as rubber gloves and goggles to prevent contact with contaminated materials.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing media: Water, foam extinguishing agent

Unsuitable Extinguishing media: Nothing special.

Specific hazards in case of fire: Risk of explosion. Combustion gases may contain toxic gases such as carbon monoxide, carbon dioxide, and nitrogen oxides.

Special extinguishing method:

Eliminate the source of combustion and extinguish the fire with a fire extinguishing agent.
Quickly move any portable containers to a safe location.
Do not allow anyone other than those involved to enter the area around the fire.

Specific hazards arising from the chemical product:

When fighting a fire, wear appropriate protective equipment to avoid inhaling smoke.
Fight the fire from upwind to avoid inhaling toxic fumes.
Wear self-contained breathing apparatus as appropriate. Do not fight the fire if the flames reach an explosive.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Wear respirator, chemical safety goggles, rubber boots and heavy rubber gloves.
Work from upwind of the leak site and evacuate anyone downwind.
Stretch ropes around the area of the leak to prevent anyone other than those involved from entering.

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:

Remove any nearby ignition sources, and carefully sweep up and remove dust so that it does not scatter. After completely removing the spilled material, ventilate and clean the spill area.

7. HANDLING AND STORAGE

Handling:

Technical measures: Remove sources of ignition and prevent the generation and accumulation of static electricity.

Precautions for safe handling: Avoid heating, impact, and friction.
Take care not to spill when taking the product out of or putting it in a container.
Be careful not to inhale or swallow any scattered solids. Take care not to let the product get into your eyes or on your skin.
When handling the product, wear protective equipment appropriate to the work situation from those listed in Section 8, and use explosion-proof local exhaust

ventilation.
After handling, wash your hands, face, etc. thoroughly and gargle.

Contact avoidance: Avoid contact with incompatible substances, open flames and high temperatures.

Storage:

Technical measures: Storage areas must be equipped with the necessary lighting and ventilation for storing or handling hazardous or harmful materials.

Substances that must not be mixed: oxidizers, strong acids, metals

Condition for safe storage: Keep container tightly closed. Store in a cool dry place. Be careful of high temperatures.

Recommended storage temperature: Room temperature.

Container and packaging materials for safe handling: No data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls: Use an explosion-proof local exhaust ventilation system.
Install emergency eyewash facilities and showers near the handling area.

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 (crystals or crystalline powder)

Color: White or slightly reddish white

Odor: No data available

Melting point/freezing point: 156 - 161 °C

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: 180 °C

pH: No data available

Kinematic viscosity: No data available

Solubility: Easily dissolved in hot water, soluble in MeOH or DMF

***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: It is classified as a Class 1 self-reactive substance under Japan's Fire Service Act, Class 5.

Chemical stability: Stable under normal conditions of storage and handling and does not undergo hazardous decomposition or polymerization. Explosion risk on contact with metals.

Possibility of hazardous reactions: When heated above 180℃, it decomposes rapidly and generates heat.
It will explode if subjected to a strong impact.

Conditions to avoid: Direct sunlight, heat, open flame, high temperature, impact, friction

Incompatible materials: Oxidizing agents, strong acids, metals

Hazardous decomposition products: Combustion and high temperatures may produce toxic gases (carbon monoxide, carbon dioxide, nitrogen oxides, etc.).

11. TOXICOLOGICAL INFORMATION

Acute toxicity: LD_{50} (*p.o* .mouse): 7,000 mg/kg GHS classification Not classified
LDLo (*p.o.* rat): 5,000 mg/kg
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:
UN number: 0508
Proper shipping name: 1-HYDROXYBENZOTRIAZOLE, ANHYDROUS, dry or wetted with less than 20% water, by mass
UN classification: 1.3C
Packing class: Not applicable
Regulatory information if there are Japanese regulations:
Land regulation information: Comply with the provisions of the Fire Service Act and the Road Act.
Maritime regulation information: Comply with the regulations set forth in the Ship Safety Act/Regulations on the Transport and Storage of Dangerous Goods by Ship, and the Port Regulations Act.
Aviation regulation information: Comply with the provisions of the Aviation Act/Enforcement Regulations of the Aviation Act.
Emergency First Aid Guideline (Container Yellow Card) Number: 112

15. REGULATORY INFORMATION

Names of applicable Japanese laws and information on regulation based on those laws:
Fire Service Act: Hazardous materials, Class 5, Type 1, self-reactive substances
Aviation Act: Prohibited from loading (Article 194 of the Enforcement Regulations, Notification Attached Table 1, UN number 0503, 1-hydroxybenzotriazole (anhydrous))
Ship Safety Act: Explosives (Article 12 of the Enforcement Regulations, Notification Attached Table 547)
Road Act: Restrictions on vehicle traffic (Article 19-13 of the Enforcement Order, Japan Expressway Holding and Debt Repayment Corporation Public Notice No. 12, Attached Table 2) [5. Azo compounds]
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-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)
5. CAS SciFinder^{n}
6. United Nations Recommendations on the Transport of Dangerous Goods, 21st Edition, p.205
7. North America 2020 EMERGENCY RESPONSE GUIDEBOOK