

### 1 Identification of substance:

- **Product name:** Trypsin 250
- **Catalog number:** 215240
- **Manufacturer/Supplier:**  
BD Diagnostic Systems  
7 Loveton Circle  
Sparks, MD 21152  
Tel: (410) 771-0100 or (800) 638-8663
- **Information department:** Technical Services
- **Emergency information:**  
In case of a chemical emergency, spill, fire, exposure, or accident contact BD Diagnostic Systems at (410)771-0100 or (800)638-8663, or ChemTrec at (800)424-9300.

### 2 Composition/Data on components:

- **Chemical characterization:**
- **Identification number(s):**
- **EINECS Number:** 232-650-8
- **EU Number:** 647-010-00-7
- **Chemical characterization**
- **Description:** Mixture consisting of the following components.

· **Dangerous components:**

9002-07-7	trypsin	82.5%
57-50-1	sucrose	17.5%

### 3 Hazards identification

· **Hazard description:**



Xn Harmful

· **Information pertaining to particular dangers for man and environment**

- R 20/22 Harmful by inhalation and if swallowed.
- R 36/37/38 Irritating to eyes, respiratory system and skin.
- R 42/43 May cause sensitization by inhalation and skin contact.

· **Classification system**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

· **NFPA ratings (scale 0-4)**



Health = 1  
Fire = 0  
Reactivity = 0

**Product name: Trypsin 250**

(Contd. of page 1)

**4 First aid measures**

- **General information** No special measures required.
- **After inhalation** Supply fresh air and seek medical advice.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for 15 minutes under running water. Then consult a doctor.
- **After swallowing** Immediately call a doctor.
- **Information for doctor** Show this product label or this MSDS.

**5 Fire fighting measures**

- **Suitable extinguishing agents**  
CO<sub>2</sub>, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards caused by the material, its products of combustion or resulting gases:**  
Nitrogen oxides (NO<sub>x</sub>)
- **Protective equipment:** Wear self-contained respiratory protective device.

**6 Accidental release measures**

- **Person-related safety precautions:** Not required.
- **Measures for environmental protection:** Wipe up with damp sponge or mop.
- **Measures for cleaning/collecting:** No special measures required.
- **Additional information:**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

**7 Handling and storage**

- **Handling**
- **Information for safe handling:**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of dust.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** < 30 C
- **Information about storage in one common storage facility:** Store away from oxidizing agents.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed containers.

**8 Exposure controls and personal protection**

- **Additional information about design of technical systems:** No further data; see item 7.

(Contd. on page 3)

USA

Printing date 01/11/2006

Reviewed on 09/27/2004

**Product name: Trypsin 250**

(Contd. of page 2)

**· Components with limit values that require monitoring at the workplace:**

**57-50-1 sucrose**

PEL	15*; 5** mg/m <sup>3</sup> *Total dust **Respirable fraction
REL	10*; 5** mg/m <sup>3</sup> *Total dust **Respirable fraction
TLV	10 mg/m <sup>3</sup>

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Personal Protective Equipment**

· **General protective and hygienic measures**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure, use a chemical fume hood or a NIOSH/MSHA-approved respirator.

· **Protection of hands:**



Chemical resistant gloves (i.e. nitrile, or equivalent).

· **Eye protection:** Safety glasses

· **Body protection:** Protective work clothing (lab coat).

**9 Physical and chemical properties:**

· **General Information**

<b>Form:</b>	Solid. Powder
<b>Color:</b>	Whitish
<b>Odor:</b>	Characteristic

· **Change in condition**

**Melting point/Melting range:** Not determined  
**Boiling point/Boiling range:** Not determined

· **Flash point:** Not applicable

· **Flammability (solid, gaseous)** Product is not flammable.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Density:** Not determined

· **Solubility in / Miscibility with**

**Water:** Soluble

(Contd. on page 4)

Printing date 01/11/2006

Reviewed on 09/27/2004

**Product name: Trypsin 250**

(Contd. of page 3)

· **Solvent content:**· **Solids content:** 100.0 %**10 Stability and reactivity**

- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known
- **Dangerous products of decomposition:** Nitrogen oxides (NO<sub>x</sub>)

**11 Toxicological information**· **Acute toxicity:**· **LD/LC50 values that are relevant for classification:**

9002-07-7 trypsin

Oral LD50 1526 mg/kg (mou)

· **Primary irritant effect:**· **on the skin:** Irritant to skin and mucous membranes.· **on the eye:** Irritating effect.· **Sensitization:**

Sensitization possible through inhalation.

Sensitization possible through skin contact.

· **Subacute to chronic toxicity:**

Target organs: eyes and skin

Target organs: respiratory system

· **Additional toxicological information:**

Irritant

The product shows the following dangers according to internally approved calculation methods for preparations:

Exposure may cause allergic reaction in individuals sensitive to proteolytic enzymes.

**12 Ecological information:**· **Ecotoxicological effects:**· **Other information:**

The ecological effects have not been thoroughly investigated, but currently none have been identified.

· **General notes:** Not known to be hazardous to water.**13 Disposal considerations**· **Product:**· **Recommendation**

Smaller quantities can be disposed of with solid waste.

This product is not considered a RCRA hazardous waste.

Dispose of material in accordance with federal (40 CFR 261.3), state and local requirements.

(Contd. on page 5)



Printing date 01/11/2006

Reviewed on 09/27/2004

Product name: Trypsin 250

(Contd. of page 4)

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to state and federal regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

- **DOT regulations:**
- **Hazard class:** -
- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -

### 15 Regulations

- **SARA Section 355 (extremely hazardous substances)**  
None of the ingredients is listed.
- **SARA Section 313 (specific toxic chemical listings)**  
None of the ingredients is listed.
- **TSCA (Toxic Substances Control Act)**  
All ingredients are listed.
- **California Proposition 65 - Chemicals known to cause cancer**  
None of the ingredients is listed.
- **California Proposition 65 - Chemicals known to cause reproductive toxicity for females:**  
None of the ingredients is listed.
- **California Proposition 65 - Chemicals known to cause reproductive toxicity for males:**  
None of the ingredients is listed.
- **California Proposition 65 - Chemicals known to cause developmental toxicity:**  
None of the ingredients is listed.
- **Carcinogenicity categories**
- **IARC (International Agency for Research on Cancer)**  
None of the ingredients is listed.
- **NTP (National Toxicology Program)**  
None of the ingredients is listed.
- **TLV (Threshold Limit Value established by ACGIH)**  
57-50-1 | sucrose

A4

(Contd. on page 6)



**Material Safety Data Sheet**  
acc. to ISO/DIS 11014

Printing date 01/11/2006

Reviewed on 09/27/2004

**Product name: Trypsin 250**

(Contd. of page 5)

**· Product related hazard information:**

*The product has been classified and marked in accordance with regulations on hazardous materials.*

**· Hazard symbols:**

*Xn Harmful*

**· Hazard-determining components of labeling:**

*trypsin*

*sucrose*

**· Risk phrases:**

*20/22 Harmful by inhalation and if swallowed.*

*36/37/38 Irritating to eyes, respiratory system and skin.*

*42/43 May cause sensitization by inhalation and skin contact.*

**· Safety phrases:**

*7 Keep container tightly closed.*

*22 Do not breathe dust.*

*24/25 Avoid contact with skin and eyes.*

*36/37 Wear suitable protective clothing and gloves.*

**16 Other information:**

*To the best of our knowledge, the information contained herein is accurate. However, neither Becton, Dickinson and Company or any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.*

**· Department issuing MSDS:** *Safety and Environment Department*

**· Contact:** *Technical Service Representative*

USA