

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 03.05.2018

Version number 2

Revision: 04.10.2017

SECTION 1: Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**

· **Trade name:** Trypsin 1:250 from bovine pancreas



· **Article number:** 37289

· **CAS Number:**

9002-07-7

· **EC number:**

232-650-8

· **Index number:**

647-010-00-7

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

· **Application of the substance / the mixture** Laboratory chemicals

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

SERVA Electrophoresis GmbH

Carl-Benz-Str. 7

D-69115 Heidelberg

Tel.: +49 6221 13840-0

FAX: +49 6221 13840-10

msds.info@serva.de

· **Information department:** Product Safety department Tel.: +49 6221 13840-35

· **1.4 Emergency telephone number:**

Medical Emergency Information in case of poisoning:

Poison Information Center Mainz - Phone: +49 (0) 6131 19240

(advisory service in German or English language)

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS08

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

· **Hazard pictograms** GHS07, GHS08

· **Signal word** Danger

· **Hazard statements**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

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- **Precautionary statements**
 - P261 Avoid breathing dust.
 - P280 Wear protective gloves/protective clothing/eye protection/face protection.
 - P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 - P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 - P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
- **Labelling of packages where the contents do not exceed 125 ml**
- **Hazard pictograms** GHS07, GHS08
- **Signal word** Danger
- **Hazard statements**
 - H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- **Precautionary statements**
 - P280 Wear protective gloves/protective clothing/eye protection/face protection.
 - P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.

SECTION 3: Composition/information on ingredients

- **3.1 Chemical characterisation: Substances**
- **CAS No. Description:**
 - 9002-07-7 Trypsin
- **Identification number(s):**
- **EC number:** 232-650-8
- **Index number:** 647-010-00-7

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact**
 - Immediately wash with water and soap and rinse thoroughly. Consult doctor if you feel unwell.
 - Remove contaminated clothing immediately.
- **After eye contact**
 - Rinse opened eye for several minutes under running water. Remove present contact lenses, if easy to do, and continue rinsing. Consult ophthalmologist In case of complaints.
- **After swallowing**
 - Wash out mouth. Drink plenty of water and supply fresh air. Consult doctor if you feel unwell.
- **4.2 Most important symptoms and effects, both acute and delayed**
 - No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
 - No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**
 - CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture**
 - In case of fire, the following can be formed, but not limited to:
 - Nitrogen oxides (NOx)

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- Carbon monoxide and carbon dioxide
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
 - Wear protective clothing.
 - Ensure adequate ventilation
 - Avoid formation of dust.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
 - Pick up mechanically.
 - Dispose contaminated material as waste according to item 13.
- **6.4 Reference to other sections**
 - See Section 7 for information on safe handling
 - See Section 8 for information on personal protection equipment.
 - See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
 - Ensure good ventilation/exhaustion at the workplace.
 - Prevent formation of dust.
 - Wear respiratory protection.
 - Avoid contact with eyes and skin.
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store at -15 to -25 °C
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
 - Keep receptacle tightly sealed and store in dry conditions.
 - Protect from direct sunlight.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**
 - Keep away from foodstuffs, beverages and feed.
 - Store protective clothing separately.
 - 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:**
 - Short term filter device:
 - Filter P2.

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- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**
Natural rubber, NR
Nitrile rubber, NBR
- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	lyophilisate
Colour:	White
Odour:	Odourless
- **pH-value (10 g/l) :** 3-5
- **Change in condition**

Melting point/freezing point:	undetermined
Initial boiling point and boiling range:	undetermined
- **Flash point:** Not applicable
- **Flammability (solid, gaseous)** Product is not flammable.
- **Ignition temperature:**

Decomposition temperature:	> 40 °C
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- **Explosive properties:** Product does not present an explosion hazard.
- **Density:** Not determined
- **Solubility in / Miscibility with**

Water at 20 °C:	10 g/l
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- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
Thermal decomposition: > 40 °C
- **10.3 Possibility of hazardous reactions**
As the product is supplied it is not capable of dust explosion; however enrichment with fine dust causes risk of dust explosion

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- **10.4 Conditions to avoid high temperatures**
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** In case of fire: See Section 5

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values that are relevant for classification:**

9002-07-7 Trypsin

Oral	LD50	> 5000 mg/kg (rat)
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- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation**
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause respiratory irritation.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
Do not allow product to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Disposal must be made according to official regulations.
- **Uncleaned packagings:**
- **Recommendation:**
Disposal of uncleaned packagings must be made according to official regulations in the same manner as the product.

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*IATA: International Air Transport Association**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Skin Irrit. 2: Skin corrosion/irritation – Category 2**Eye Irrit. 2: Serious eye damage/eye irritation – Category 2**Resp. Sens. 1: Respiratory sensitisation – Category 1**STOT SE 3: Specific target organ toxicity (single exposure) – Category 3***. * Data compared to the previous version altered.**

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