

# Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 05.09.2008

Revision: 05.09.2008

## 1 Identification of substance:

· **Product details:**

· **Trade name:** Collagenase NB 1 GMP Grade  
from Clostridium histolyticum

**SERVA**  
Electrophoresis

· **Article number:** 17452

· **Application of the substance / the preparation**  
Laboratory chemicals  
Pharma Active ingredients

· **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

· **Emergency information:** +49 6131 19240 (university hospital Mainz)

## 2 Hazards identification

· **Hazard description:**



Xn Harmful

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

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

R 42/43 May cause sensitisation by inhalation and skin contact.

Only for trade users / technical specialists

· **Classification system**

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

· **GHS label elements**



Danger

3.4/1 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

3.2/2 - Causes skin irritation.

3.3/2A - Causes serious eye irritation.

3.4/1 - May cause an allergic skin reaction.



Warning

3.8/3 - May cause respiratory irritation.

· **Prevention:**

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

In case of inadequate ventilation wear respiratory protection.

· **Response:**

IF ON SKIN: Wash with plenty of soap and water.

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*IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.*

*IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.*

*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*

*Call a POISON CENTER or doctor/physician if you feel unwell.*

*Specific treatment (see label).*

*If skin irritation occurs: Get medical advice/attention.*

*If skin irritation or rash occurs: Get medical advice/attention.*

*If eye irritation persists: Get medical advice/attention.*

*If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.*

*Take off contaminated clothing and wash before reuse.*

*Wash contaminated clothing before reuse.*

**· Storage:**

*Store in a well-ventilated place. Keep container tightly closed.*

*Store locked up.*

**· Disposal:**

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

### 3 Composition/information on ingredients

**· Chemical characterization:**

**· CAS No. Description:**

*9001-12-1 Collagenase*

**· Identification number(s):**

**· EINECS Number:** 232-582-9

### 4 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.*

**· After eye contact**

*Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.*

**· After swallowing** *Drink copious amounts of water and provide fresh air. Call for doctor immediately.*

### 5 Fire fighting measures

**· Suitable extinguishing agents**

*CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.*

**· Protective equipment:** *No special measures required.*

### 6 Accidental release measures

**· Person-related safety precautions:** *Wear protective clothing.*

**· Measures for environmental protection:** *Do not allow to enter sewers/ surface or ground water.*

**· Measures for cleaning/collecting:**

*Dispose contaminated material as waste according to item 13.*

*Ensure adequate ventilation.*

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## 7 Handling and storage

- **Handling**
- **Information for safe handling:**
  - Ensure good ventilation/exhaustion at the workplace.
  - Prevent formation of dust.
  - Store in cool, dry place in tightly closed receptacles.
- **Information about protection against explosions and fires:**
  - Protect against electrostatic charges.
  - Keep ignition sources away - Do not smoke.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.

## 8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **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.
- **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:**
  - Short term filter device:
  - Filter P2.
- **Protection of hands:**
  - Protective gloves.
  - 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.

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## 9 Physical and chemical properties:

### · General Information

**Form:** Powder  
**Colour:** Light brown  
**Odour:** Weak, characteristic

### · Change in condition

**Melting point/Melting range:** undetermined  
**Boiling point/Boiling range:** undetermined

· **Flash point:** Not applicable

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

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

· **Density:** Not determined

· **Bulk density at 20°C:** ca.500 kg/m<sup>3</sup>

· **Solubility in / Miscibility with  
Water at 20°C:** 300 g/l

· **pH-value (10 g/l) at 20°C:** 6

## 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:** No dangerous decomposition products known

## 11 Toxicological information

- **Acute toxicity:**
- **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.
- **Sensitisation** May cause sensitisation by inhalation and skin contact.

## 12 Ecological information:

- **General notes:**
- Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
- Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

## 13 Disposal considerations

- **Product:**
- **Recommendation**
- Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

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

## 14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -

- **Maritime transport IMDG:**
- **IMDG Class:** -

- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -

- **UN "Model Regulation":** -

- **Transport/Additional information:** Not dangerous according to the above specifications.

## 15 Regulations

- **Markings according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

- **Code letter and hazard designation of product:**

Xn Harmful

- **Risk phrases:**

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

42/43 May cause sensitisation by inhalation and skin contact.

- **Safety phrases:**

22 Do not breathe dust.

24 Avoid contact with skin.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

36/37 Wear suitable protective clothing and gloves.

45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

- **Special labeling of certain preparations:**

Only for trade users / technical specialists

- **National regulations**

- **Technical instructions (air):**

Class	Share in %
I	100,0

- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

## 16 Other information:

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing MSDS:** Product safety department
- **Contact:** +49 6221 13840-35

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· **Abbreviations and acronyms:**

*ADR: Accord européen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*

*RID: Règlement internationale concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)*

*IMDG: International Maritime Code for Dangerous Goods*

*IATA: International Air Transport Association*

*IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)*

*ICAO: International Civil Aviation Organization*

*ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)*

*GHS: Globally Harmonized 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)*

· **\* Data compared to the previous version altered.**

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