

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 4 Standard Grade
from Clostridium histolyticum

· **Synonyma** Clostridiopeptidase A; Collagenase A

· **Article number:** 17454

· **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)

SERVA
Electrophoresis

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.

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· **Response:**

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

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**

CO₂, 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/m³

· **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	80-100

- **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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