

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 04/05/2018

## 1 Identification

- **Product identifier**
- **Trade name:** Ribonuclease A from bovine pancreas  
min. 80 Kunitz units/mg
- **Article number:** 34388
- **CAS Number:**  
9001-99-4
- **EC number:**  
232-646-6
- **Application of the substance / the mixture** Laboratory chemicals
- **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
- **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)



## 2 Hazard(s) identification

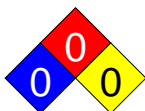
- **Classification of the substance or mixture**



GHS08

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

- **Label elements**
- **GHS label elements**  
The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** GHS08
- **Signal word** Danger
- **Hazard statements**  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- **Precautionary statements**  
Avoid breathing dust.  
[In case of inadequate ventilation] wear respiratory protection.  
If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.  
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.  
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0  
Fire = 0  
Reactivity = 0

(Contd. on page 2)

US

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(Contd. of page 1)

· **HMIS-ratings (scale 0 - 4)**

HEALTH	0	Health = *0
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.

### 3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**  
9001-99-4 Nuclease, ribo-
- **Identification number(s)**
- **EC number:** 232-646-6
- **Description:**
- **MW:** ca. 13 700

### 4 First-aid measures

- **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.
- **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:**  
Rinse out mouth and then drink plenty of water.  
If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:  
Nitrogen oxides (NO<sub>x</sub>)  
Carbon monoxide and carbon dioxide
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective clothing.

(Contd. on page 3)

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(Contd. of page 2)

- Ensure adequate ventilation
- Avoid formation of dust.
- Do not inhale dusts.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
  - Pick up mechanically.
  - Dispose contaminated material as waste according to item 13.
- **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.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
  - Ensure good ventilation/exhaustion at the workplace.
  - Prevent formation of dust.
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
  - **Requirements to be met by storerooms and receptacles:** Store at +2 to +8 °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.
  - **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **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.
- **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.
  - Avoid contact with the eyes and skin.
  - Wash hands before breaks and at the end of work.
- **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.

(Contd. on page 4)

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(Contd. of page 3)

- **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*

## 9 Physical and chemical properties

### · Information on basic physical and chemical properties

#### · General Information

#### · Appearance:

**Form:** *lyophilisate*

**Color:** *White*

· **Odor:** *Odorless*

#### · Change in condition

**Melting point/Melting range:** *no information available*

**Boiling point/Boiling range:** *no information available*

· **Flash point:** *no information available*

· **Flammability (solid, gaseous):** *no information available*

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

· **Density:** *no information available*

#### · Solubility in / Miscibility with

**Water at 20 °C (68 °F):** *min. 1 g/l*

· **Other information** *No further relevant information available.*

## 10 Stability and reactivity

- **Reactivity** *No further relevant information available.*
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.*
- **Possibility of hazardous reactions** *No further relevant informations available.*
- **Conditions to avoid** *high temperatures*
- **Incompatible materials:** *No further relevant information available.*
- **Hazardous decomposition products:** *In case of fire: See Section 5*

## 11 Toxicological information

### · Information on toxicological effects

#### · Acute toxicity:

#### · Primary irritant effect:

· **on the skin:** *No irritant effect.*

· **on the eye:** *No irritating effect.*

· **Sensitization:** *Sensitization possible through inhalation.*

#### · Additional toxicological information:

#### · Carcinogenic categories

· **IARC (International Agency for Research on Cancer)** *Substance is not listed.*

(Contd. on page 5)

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(Contd. of page 4)

- **NTP (National Toxicology Program)** Substance is not listed.
- **OSHA-Ca (Occupational Safety & Health Administration)** Substance is not listed.

## 12 Ecological information

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

## 13 Disposal considerations

- **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.*

## 14 Transport information

- |  |                 |
|--|-----------------|
| <ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, ADR, ADN, IMDG, IATA</b></li> </ul>                         | Void            |
| <ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT, ADR, ADN, IMDG, IATA</b></li> </ul>           | Void            |
| <ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT, ADN</b></li> <li>· <b>Class</b></li> </ul> | Void            |
| <ul style="list-style-type: none"> <li>· <b>ADR, IMDG, IATA</b></li> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>               | Void<br>-       |
| <ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>                          | Void            |
| <ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> </ul>  | Not applicable. |
| <ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> </ul>  | Not applicable. |

(Contd. on page 6)

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(Contd. of page 5)

- |  |  |
|--|--|
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable.                                      |
| · <b>Transport/Additional information:</b>                                       | Not dangerous according to the above specifications. |
| · <b>UN "Model Regulation":</b>  | Void   |

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is not listed.
- **TSCA (Toxic Substances Control Act):** Substance is listed.
- **Proposition 65** Substance is not listed.
- **Chemicals known to cause cancer:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
- **Chemicals known to cause developmental toxicity:** Substance is not listed.
  
- **Carcinogenicity categories**
- **EPA (Environmental Protection Agency)** Substance is not listed.
- **TLV (Threshold Limit Value established by ACGIH)** Substance is not listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **GHS label elements**  
*The substance is classified and labeled according to the Globally Harmonized System (GHS).*
- **Hazard pictograms** GHS08
- **Signal word** Danger
- **Hazard statements**  
*May cause allergy or asthma symptoms or breathing difficulties if inhaled.*
- **Precautionary statements**  
*Avoid breathing dust.*  
*[In case of inadequate ventilation] wear respiratory protection.*  
*If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.*  
*If experiencing respiratory symptoms: Call a POISON CENTER/doctor.*  
*Dispose of contents/container in accordance with local/regional/national/international regulations.*
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 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 SDS:** Product safety department
- **Contact:** +49 6221 13840-35
- **Date of preparation / last revision** 05/03/2018 / 1
- **Abbreviations and acronyms:**  
*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)*  
*ICAO: International Civil Aviation Organisation*  
*PBT: persistent, bioaccumulative, toxic substance (REACH)*  
*vPvB: very persistent, very bioaccumulative substance (REACH)*  
*REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals*  
*CLP: Regulation on classification, labelling and packaging of substances and mixtures*  
*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*  
*IMDG: International Maritime Code for Dangerous Goods*  
*DOT: US Department of Transportation*  
*IATA: International Air Transport Association*  
*ACGIH: American Conference of Governmental Industrial Hygienists*

(Contd. on page 7)

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(Contd. of page 6)

EINECS: European Inventory of Existing Commercial Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
NIOSH: National Institute for Occupational Safety  
OSHA: Occupational Safety & Health  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit  
Resp. Sens. 1: Respiratory sensitisation – Category 1

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

US