

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

Printing date 10.10.2023

Version number 5

Revision: 10.10.2023

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

· **1.1 Product identifier**

· **Trade name:** Ribonuclease A
from bovine pancreas min. 70 Kunitz units/mg



· **Article number:** 34390

· **CAS Number:**
9001-99-4

· **EC number:**
232-646-6

· **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:**

Emergency medical information in case of poisoning
Poison Information Centre Mainz-Tel: +49 (0) 6131 19240
(Counselling in German and English)

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.

· **2.2 Label elements**

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

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

· **Hazard pictograms:** GHS08

· **Signal word:** Danger

· **Hazard statements:**

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

· **Precautionary statements**

P261 Avoid breathing dust.

P284 Wear respiratory protection.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment:**

· **PBT:** PBT - Assessment not available.

· **vPvB:** vPvB - Assessment not available.

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· **Determination of endocrine-disrupting properties** No further relevant information available.

SECTION 3: Composition/information on ingredients

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

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.
Remove contaminated clothing immediately.
- **After eye contact:**
Rinse opened eye for several minutes with running water. Remove contact lenses, if possible, and continue rinsing. In case of complaints, consult an ophthalmologist.
- **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 (NO_x)
Carbon monoxide and carbon dioxide
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

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

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See Section 13 for disposal information.

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SECTION 7: Handling and storage

- **7.1 Precautions for safe handling:**
 - Ensure good ventilation/exhaustion at the workplace.
 - Avoid contact with eyes and skin.
 - Prevent formation of dust.
- **Information about protection against explosions and fires:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
 - **Storage**
 - **Requirements to be met by storerooms and receptacles:** Storage at +2 to +8 °C
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:**
 - Store containers tightly closed and dry.
 - This product is hygroscopic.
- **7.3 Specific end use(s):** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **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**
 - **Appropriate engineering controls:** No further data; see section 7.
 - **Individual protection measures, such as 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.
 - **Hand protection:**
 - 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/face protection:** Safety glasses

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· **Body protection:** Protective work clothing.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information:

· Physical state:	Solid.
· Colour:	White
· Odour:	Odourless
· Odour threshold:	No information available
· Melting point/freezing point:	not applicable (decomposition)
· Boiling point or initial boiling point and boiling range:	not applicable (decomposition)
· Flammability:	No information available
· Lower and upper explosion limit:	
· Lower:	No information available
· Upper:	No information available
· Flash point:	No information available
· Decomposition temperature:	No information available
· pH:	No information available
· Viscosity:	
· Kinematic viscosity:	No information available
· Dynamic viscosity:	No information available
· Solubility:	
· Water:	Not determined.
· Partition coefficient n-octanol/water (log value):	No information available
· Vapour pressure:	No information available
· Density and/or relative density:	
· Density:	No information available
· Relative density:	No information available
· Particle characteristics	No information available

· 9.2 Other information

· Appearance:	
· Form:	lyophilisate
· Important information on protection of health and environment, and on safety:	
· Explosive properties:	Product does not present an explosion hazard.
· Molecular weight	~13,700 g/mol

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.
- **10.3 Possibility of hazardous reactions:** No further relevant information available.
- **10.4 Conditions to avoid:**
 - Humidity
 - High temperatures
- **10.5 Incompatible materials:** Avoid contact with strong oxidizers.
- **10.6 Hazardous decomposition products:** In case of fire: see section 5

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SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:**
- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **Skin corrosion/irritation:** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation:** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation:**
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- **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:** Based on available data, the classification criteria are not met.
- **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.
- **11.2 Information on other hazards:**
- **Endocrine disrupting properties:** No relevant information available

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.
- **12.5 Results of PBT and vPvB assessment:**
- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.
- **12.6 Endocrine disrupting properties:** For information on endocrine disrupting properties see section 11.
- **12.7 Other adverse effects:**
- **Additional ecological information:**
- **General notes:**
Do not allow product to reach ground water, water course or sewage system.
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Dispose of in accordance with official regulations.
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:**
Uncleaned packaging must be disposed of in the same way as the product in accordance with official regulations.

SECTION 14: Transport information

- | | |
|---------------------------------------|------|
| · 14.1 UN number or ID number | |
| · ADR, ADN, IMDG, IATA | Void |
| · 14.2 UN proper shipping name | |
| · ADR, ADN, IMDG, IATA | Void |

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· 14.3 Transport hazard class(es)	
· ADR, ADN, IMDG, IATA	
· Class:	Void
· 14.4 Packing group	
· ADR, IMDG, IATA	Void
· 14.5 Environmental hazards	
· Marine pollutant:	No
· 14.6 Special precautions for user	Not applicable.
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN "Model Regulation":	Void

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
Substance is not listed.
- **REGULATION (EU) 2019/1148**
- **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**
Substance is not listed.
- **Annex II - REPORTABLE EXPLOSIVES PRECURSORS** Substance is not listed.
- **Regulation (EC) No 273/2004 on drug precursors** Substance is not listed.
- **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**
Substance is not listed.

· **National regulations:**

· **Technical instructions (air):**

Class	Share in %
I	80-100

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

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 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 previous version:** 02.05.2018

· **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

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PBT: persistent, bioaccumulative, toxic substance (UK REACH)

vPvB: very persistent, very bioaccumulative substance (UK REACH)

UK REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

GB CLP: Regulation on classification, labelling and packaging of substances and mixtures

bw: body weight

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

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)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Resp. Sens. 1: Respiratory sensitisation – Category 1

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