

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

Printing date 26.04.2018

Version number 3

Revision: 06.04.2018

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

**1.1 Product identifier**

Trade name: Cellulase »Onozuka RS«  
from Trichoderma viride

**SERVA**  
Electrophoresis

Article number: 16420

CAS Number:  
9012-54-8

EC number:  
232-734-4

Index number:  
647-002-00-3

**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.

**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** GHS08

**Signal word** Danger

**Hazard statements**

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

**Precautionary statements**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P284 [In case of inadequate ventilation] 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:** Not applicable.

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· **vPvB:** Not applicable.

**SECTION 3: Composition/information on ingredients**

· **3.1 Chemical characterisation: Substances**· **CAS No. Description:**

9012-54-8 Cellulase

· **Identification number(s):**· **EC number:** 232-734-4· **Index number:** 647-002-00-3· **Description:**· **MW:** ca. 52000· **Regulation (EC) No 648/2004 on detergents / Labelling for contents**

enzymes

≥30%

**SECTION 4: First aid measures**

· **4.1 Description of first aid measures**· **After inhalation** Supply fresh air and to be sure call for a doctor.· **After skin contact** Immediately wash with water and soap and rinse thoroughly.· **After eye contact** Rinse opened eye for several minutes under running water. Then consult doctor.· **After swallowing** Drink copious amounts of water and provide fresh air. Call for doctor immediately.· **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**CO<sub>2</sub>, 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** No further relevant information available.· **5.3 Advice for firefighters**· **Protective equipment:** No special measures required.

**SECTION 6: Accidental release measures**

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

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- **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:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **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.  
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.
- **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:** Powder
- **Colour:** Beige
- **Odour:** Odourless
- **pH-value (10 g/l) at 20 °C:** 5.7

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- |   |   |
|---|---|
| · <b>Change in condition</b>                    |   |
| <b>Melting point/freezing point:</b>            | undetermined                                  |
| <b>Initial boiling point and boiling range:</b> | undetermined                                  |
| · <b>Flash point:</b>                           | Not applicable                                |
| · <b>Flammability (solid, gaseous)</b>          | Product is not flammable.                     |
| · <b>Explosive properties:</b>                  | Product does not present an explosion hazard. |
| · <b>Density:</b>                               | Not determined                                |
| · <b>Solubility in / Miscibility with</b>       |   |
| <b>Water at 20 °C:</b>                          | 1 g/l   |
| · <b>9.2 Other information</b>                  | 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.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known

### SECTION 11: Toxicological information

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

### 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 undiluted product or large quantities of it to reach ground water, water course or sewage system.

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- **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.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

**SECTION 14: Transport information**

- |  |  |
|--|--|
| · <b>14.1 UN-Number</b>  | Void   |
| · <b>ADR, ADN, IMDG, IATA</b>  | Void   |
| · <b>14.2 UN proper shipping name</b>  | Void   |
| · <b>ADR, ADN, IMDG, IATA</b>  | Void   |
| · <b>14.3 Transport hazard class(es)</b>   | Void   |
| · <b>ADR, ADN, IMDG, IATA</b>  | Void   |
| · <b>Class</b>   | Void   |
| · <b>14.4 Packing group</b>  | Void   |
| · <b>ADR, IMDG, IATA</b>   | Void   |
| · <b>14.5 Environmental hazards:</b>   | Not applicable.                                      |
| · <b>14.6 Special precautions for user</b>                                       | Not applicable.                                      |
| · <b>14.7 Transport in bulk according to Annex II of Marpol 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   |

**SECTION 15: Regulatory information**

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **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
- **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)

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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

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

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

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