

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:** *Cellulase »Onozuka RS«
from Trichoderma viride*

SERVA
Electrophoresis

- **Article number:** 16420

- **Application of the substance / the preparation** Laboratory chemicals

- **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 42 May cause sensitisation by inhalation.

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.

- **Prevention:**

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

In case of inadequate ventilation wear respiratory protection.

- **Response:**

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

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

- **Disposal:**

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

3 Composition/information on ingredients

- **Chemical characterization:**

- **CAS No. Description:**

9012-54-8 Cellulase

- **Identification number(s):**

- **EINECS Number:** 232-734-4

- **Index number:** 647-002-00-3

(Contd. on page 2)

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(Contd. of page 1)

- **Chemical characterization**
- **Description:**
- **MW:** ca. 52000

· **Regulation (EC) No 648/2004 on detergents / Labelling for contents**

enzymes

≥ 30%

4 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.

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.

7 Handling and storage

- **Handling**
- **Information for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.
- **Information about protection against explosions and fires:** No special measures required.
- **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.

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.
Wash hands before breaks and at the end of work.
- **Breathing equipment:**
Short term filter device:
Filter P2.

(Contd. on page 3)

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(Contd. of page 2)

· **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.

* 9 Physical and chemical properties:

· **General Information**

Form:	Powder
Colour:	Beige
Odour:	Odourless

· **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

· **Solubility in / Miscibility with**

Water at 20°C: 1 g/l

· **pH-value (10 g/l) at 20°C:** 5.7

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:** No irritant effect.

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

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

(Contd. on page 4)

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· **Sensitisation** May cause sensitisation by inhalation.

(Contd. of page 3)

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.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

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:**

42 May cause sensitisation by inhalation.

· **Safety phrases:**

2 Keep out of the reach of children.

22 Do not breathe dust.

24 Avoid contact with skin.

36/37 Wear suitable protective clothing and gloves.

· **Special labeling of certain preparations:**

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(Contd. on page 5)

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(Contd. of page 4)

- **National regulations**
- **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**
- **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: Reglement internationale concernent 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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