

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

Printing date 24.11.2011

Version number 1

Revision: 19.10.2011

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

1.1. Product identifier

· Trade name: Glucose oxidase from Aspergillus niger min. 220 U/mg

SERVA
Electrophoresis

· Article number: 22739

· CAS Number:

9001-37-0

· EC number:

232-601-0

· 1.2. Relevant identified uses of the substance or mixture and uses advised against

· Application of the substance / the preparation 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: +49 6131 19240 (university hospital Mainz)

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.

· Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Xn; Sensitising

R42: May cause sensitisation by inhalation.

· Classification system:

The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

· 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

P285 In case of inadequate ventilation wear respiratory protection.

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

P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

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

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.

3 Composition/information on ingredients

- **3.1. Chemical characterization: Substances**
- **CAS No. Description:**
9001-37-0 Oxidase, glucose
- **Identification number(s):**
- **EC number:** 232-601-0
- **Description:**
- **MW:** ca. 160000

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 rinse with water.
- **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.
- **Information for doctor**
- **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.

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 released:
Nitrogen oxides (NO_x)
Carbon monoxide (CO)
- **5.3. Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

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 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling**
- **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 at -15 to -25 °C
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Store in dry conditions.
- **7.3. 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.
- **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:**
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

- **9.1. Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Powder
Colour:	Yellow
Odour:	Odourless
- **Change in condition**

Melting point/Melting range:	undetermined
Boiling point/Boiling range:	undetermined
- **Flash point:** Not applicable

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| · 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: | Soluble |
| · 9.2. Other information | No further relevant information available. |

10 Stability and reactivity

- **10.1. Reactivity**
- **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

11 Toxicological information

- **11.1. 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.

12 Ecological information

- **12.1. Toxicity**
- **Acquatic toxicity:** No further relevant information available.
- **12.2. Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **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) (Assessment by list): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **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.

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.

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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

- **14.1. UN-Number**
· **ADR, ADN, IMDG, IATA** Void
- **14.2. UN proper shipping name**
· **ADR, ADN, IMDG, IATA** Void
- **14.3. Transport hazard class(es)**
· **ADR, ADN, IMDG, IATA**
· **Class** Void
- **14.4. Packing group**
· **ADR, IMDG, IATA** Void
- **14.6. Special precautions for user** Not applicable.
- **14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **Transport/Additional information:** Not dangerous according to the above specifications.
- **UN "Model Regulation":** -

15 Regulatory information

- **15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Technical instructions (air):**

Class	Share in %
I	80-100
- **Water hazard class:** Water hazard class I (Assessment by list): slightly hazardous for water.
- **15.2. 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 MSDS:** Product safety department
- **Contact:** +49 6221 13840-35
- **Abbreviations and acronyms:**
 - 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)
 - RID: Règlement international 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
 - ICAO: International Civil Aviation Organization
 - GHS: Globally Harmonized System of Classification and Labelling of Chemicals
 - EINECS: European Inventory of Existing Commercial Chemical Substances

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CAS: Chemical Abstracts Service (division of the American Chemical Society)

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

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