1 Identification of substance:

- Product details:
  - Trade name: Over Sulfated Chondroitin Sulfate (OSCS) Standard
  - Article number: 31254
  - 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:
  T Toxic

- Information pertaining to particular dangers for man and environment
  R 23/25 Toxic by inhalation and if swallowed.
  Only for trade users / technical specialists
  Caution - substance not yet fully tested.

- 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**

  H301 - Toxic if swallowed.
  H330 - Fatal if inhaled.

- Prevention:
  P260 Do not breathe dust/fume/gas/mist/vapours/spray.
  P264 Wash thoroughly after handling.
  P270 Do not eat, drink or smoke when using this product.
  P271 Use only outdoors or in a well-ventilated area.
  P284 Wear respiratory protection.

- Response:
  P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
  P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
  P310 Immediately call a POISON CENTER or doctor/physician.
  P320 Specific treatment is urgent (see on this label).
  P321 Specific treatment (see on this label).
  P330 Rinse mouth.

- Storage:
  P403+P233 Store in a well-ventilated place. Keep container tightly closed.
  P405 Store locked up.

(Contd. on page 2)
3 Composition/information on ingredients

- Chemical characterization:
- CAS No. Description:
  Over sulfated chondroitin sulfate
- Identification number(s): -

4 First aid measures

- General information: Remove contaminated clothing.
- 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.
- Special hazards caused by the material, its products of combustion or resulting gases:
  In case of fire, the following can be released:
  Sulphur dioxide (SO2)
  Carbon monoxide (CO)
- Protective equipment: Mount respiratory protective device.

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.
  Ensure adequate ventilation.

7 Handling and storage

- Handling:
  Information for safe handling:
  Thorough dedusting.
  Ensure good ventilation/exhaustion at the workplace.
  Open and handle receptacle with care.
  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:
  Keep receptacle tightly sealed.
  Store in dry conditions.
  Store under lock and key and with access restricted to technical experts or their assistants only.
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.
    Immediately remove all soiled and contaminated clothing
    Wash hands before breaks and at the end of work.
    Store protective clothing separately.
  - **Breathing equipment**:
    Short term filter device:
    Filter P3.
  - **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 trough 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**: White
  - **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**: Soluble
Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 15.07.2009
Revision: 15.07.2009

Trade name: Over Sulfated Chondroitin Sulfate (OSCS) Standard

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:
  - LD/LC50 values that are relevant for classification:
    - Oral LD50 - mg/kg (rat)
  - Primary irritant effect:
    - on the skin: No irritant effect.
    - on the eye: No irritating effect.
  - Sensitization: No sensitizing effects known.

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: 6.1 Toxic substances.
  - Danger code (Kemler): 60
  - UN-Number: 2811
  - Packaging group: III
  - Label: 6.1
  - Description of goods: 2811 TOXIC SOLID, ORGANIC, N.O.S. (Over sulfated chondroitin sulfate)

- Maritime transport IMDG:
  - IMDG Class: 6.1
UN Number: 2811
Label: 6.1
Packaging group: III
EMS Number: F-A,S-A
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (Over sulfated chondroitin sulfate)

Air transport ICAO-TI and IATA-DGR:
ICAO/IATA Class: 6.1
UN/ID Number: 2811
Label: 6.1
Packaging group: III
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (Over sulfated chondroitin sulfate)
UN "Model Regulation": UN2811, TOXIC SOLID, ORGANIC, N.O.S., 6.1, III

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:
T Toxic
Risk phrases:
23/25 Toxic by inhalation and if swallowed.
Safety phrases:
28 After contact with skin, wash immediately with plenty of water.
46 If swallowed, seek medical advice immediately and show this container or label.
Special labeling of certain preparations:
Only for trade users / technical specialists
Caution - substance not yet fully tested.
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: 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
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
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

* Data compared to the previous version altered.