1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers
Product name: Sodium selenite
Product Number: 214485
Brand: 034-003-00-3
CAS-No.: 10102-18-8

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Laboratory chemicals, Manufacture of substances

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
Acute toxicity, Oral (Category 2)
Acute toxicity, Inhalation (Category 3)
Skin sensitization (Category 1)
Chronic aquatic toxicity (Category 2)

Classification according to EU Directives 67/548/EEC or 1999/45/EC
Very toxic if swallowed. Toxic by inhalation. Contact with acids liberates toxic gas. May cause sensitization by skin contact. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2 Label elements
Labelling according Regulation (EC) No 1272/2008 [CLP]

- Pictogram

- Signal word: Danger
- Hazard statement(s):
  - H300: Fatal if swallowed.
  - H317: May cause an allergic skin reaction.
  - H311: Toxic if inhaled.
  - H411: Toxic to aquatic life with long lasting effects.

- Precautionary statement(s):
  - P261: Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
  - P264: Wash hands thoroughly after handling.
  - P273: Avoid release to the environment.
  - P280: Wear protective gloves.
  - P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
  - P311: Call a POISON CENTER or doctor/ physician.

Supplemental Hazard information (EU)
EUH031: Contact with acids liberates toxic gas.


- Hazard symbol(s)

R-phrase(s):
- R23: Toxic by inhalation.
- R28: Very toxic if swallowed.
- R31: Contact with acids liberates toxic gas.
- R43: May cause sensitization by skin contact.
- R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s):
- S28: After contact with skin, wash immediately with plenty of soap and water.
- S36/37: Wear suitable protective clothing and gloves.
- S45: In case of accident or if you feel unwell, seek medical advice immediately.
2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium selenite</td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>10102-18-8</td>
</tr>
<tr>
<td>EC-No.</td>
<td>233-267-9</td>
</tr>
<tr>
<td>Index-No.</td>
<td>034-003-00-3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>Formula</th>
<th>Molecular Weight</th>
<th>Weight: molar g/mol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium selenite</td>
<td>Na2O3Se</td>
<td>172.94 g/mol</td>
<td>172,94</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice:
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled:
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact:
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact:
Flush eyes with water as a precaution.

If swallowed:
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

Salivation, Tremors, Alopecia., Vomiting, Dermatitis

4.3 Indication of any immediate medical attention and special treatment needed

no data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:
Dry powder

5.2 Special hazards arising from the substance or mixture

Sodium oxides, Selenium/selenium oxides

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

no data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Do not flush with water. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
Never allow product to get in contact with water during storage. Do not store near acids.

Moisture sensitive.

7.3 Specific end uses
no data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Components with workplace control parameters

8.2 Exposure controls
Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Immersion protection
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: >480 min
Material tested:Dematri? (Z677272, Size M)

Splash protection
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: >30 min
Material tested:Dematri? (Z677272, Size M)

Data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 873000, e-mail sales@kcl.de,
test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties
a) Appearance Form: powder, crystalline
   Colour: beige
b) Odour odourless
c) Odour Threshold no data available
d) pH no data available
e) Melting point/freezing point Melting point/range: > 350 °C - liq.

f) Initial boiling point and boiling range no data available
g) Flash point no data available
h) Evaporation rate  
no data available
i) Flammability (solid, gas)  
no data available

j) Upper/lower flammability or explosive limits  
no data available
k) Vapour pressure  
no data available
l) Vapour density  
no data available
m) Relative density  
no data available
n) Water solubility  
soluble
o) Partition coefficient: n-octanol/water  
no data available
p) Autoignition temperature  
no data available
q) Decomposition temperature  
no data available
r) Viscosity  
no data available
s) Explosive properties  
no data available
t) Oxidizing properties  
no data available

9.2 Other safety information  
no data available

10. STABILITY AND REACTIVITY
10.1 Reactivity  
no data available
10.2 Chemical stability  
no data available
10.3 Possibility of hazardous reactions  
no data available
10.4 Conditions to avoid  
no data available
10.5 Incompatible materials  
Strong acids
10.6 Hazardous decomposition products  
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION
11.1 Information on toxicological effects
Acute toxicity
LD50 Oral - mouse - 7,08 mg/kg
LD50 Oral - rabbit - 2,25 mg/kg
Cardiac: Pulse rate increased without fall it BP. Lungs, Thorax, or Respiration: Respiratory stimulation. Diarrhoea
LD50 Oral - guinea pig - 5,06 mg/kg
Cardiac: Pulse rate increased without fall it BP. Lungs, Thorax, or Respiration: Respiratory stimulation. Diarrhoea
Inhalation: no data available
LD50 Intravenous - rat - 3 mg/kg
LD50 Parenteral - rat - 6,57 mg/kg
LD50 Subcutaneous - mouse - 13 mg/kg
LD50 Intravenous - mouse - 5 mg/kg
Remarks: Peripheral Nerve and Sensation: Flaccid paralysis without anesthesia (usually neuromuscular blockage). Cardiac: Other changes. Lungs, Thorax, or Respiration: Other changes.
LD50 Intracervical - mouse - 0,3 mg/kg
LD50 Intravenous - dog - 1,916 mg/kg
Remarks: Cardiac: Arrhythmias (including changes it conduction). Lungs, Thorax, or Respiration: Respiratory
stimulation. Diarrhoea
LD50 Intramuscular - rabbit - 2.53 mg/kg
LD50 Parenteral - chicken - 8.5 mg/kg
LD50 Intramuscular - Domestic Animals - 1,533 mg/kg

Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
no data available

Respiratory or skin sensitization
May cause allergic skin reaction.

Germ cell mutagenicity
Laboratory experiments have shown mutagenic effects.

Carcinogenicity
This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: A4 - Not classifiable as a human carcinogen (Sodium selenite)
3 - Group 3: Not classifiable as to its carcinogenicity to humans (Sodium selenite)

Reproductive toxicity
no data available

Specific target organ toxicity - single exposure
no data available

Specific target organ toxicity - repeated exposure
no data available

Aspiration hazard
no data available

Potential health effects
Inhalation: Toxic if inhaled. May cause respiratory tract irritation.
Ingestion: May be fatal if swallowed.
Skin: May be harmful if absorbed through skin. May cause skin irritation.
Eyes: May cause eye irritation.

Signs and Symptoms of Exposure
Salivation, Tremors, Alopecia, Vomiting, Dermatitis

Additional Information
RTECS: VS7350000

- 214485

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Toxicity to fish
LC50 - Oncorhynchus mykiss (rainbow trout) - 2,75 mg/l - 96,0 h
Toxicity to daphnia and other aquatic invertebrates
mortality NOEC - Daphnia magna (Water flea) - 0,24 mg/l - 21 d
mortality LOEC - Daphnia magna (Water flea) - 0,52 mg/l - 21 d
LC50 - Daphnia magna (Water flea) - 0,25 mg/l - 48 h

12.2 Persistence and degradability

12.3 Bioaccumulative potential
Bioaccumulation
Lepomis macrochirus - 120 d - 10 μg/l
Bioconcentration factor (BCF): 1.850

12.4 Mobility in soil
no data available

12.5 Results of PBT and vPvB assessment
no data available

12.6 Other adverse effects
Very toxic to aquatic life with long lasting effects.
13. DISPOSAL CONSIDERATIONS
13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
 Dispose of as unused product.

14. TRANSPORT INFORMATION
14.1 UN number
   ADR/RID: 2630
   IMDG: 2630
   IATA: 2630

14.2 UN proper shipping name
   ADR/RID: SELENITES (Sodium selenite)
   IMDG: SELENITES (Sodium selenite)
   IATA: Selenites (Sodium selenite)

14.3 Transport hazard class(es)
   ADR/RID: 6.1
   IMDG: 6.1
   IATA: 6.1

14.4 Packaging group
   ADR/RID: I
   IMDG: I
   IATA: I

14.5 Environmental hazards
   ADR/RID: no
   IMDG Marine pollutant: no
   IATA: no

14.6 Special precautions for user
   no data available

15. REGULATORY INFORMATION
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
no data available

15.2 Chemical Safety Assessment
no data available

16. OTHER INFORMATION
Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information this document is based on the resent state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Guidechem shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.