SAFETY DATA SHEET acc. to 453/2010/EC

SODIUM SULPHATE

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

1.1 Product identifier

Trade Name: Lenzing Sodium sulphate

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

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
SU4 manufacture of food products

1.3 Details of the supplier of the safety data sheet

Supplier: Lenzing Aktiengesellschaft,
Werkstrasse 2
A 4860 Lenzing, Austria
Phone: +43 7672 701 3262 Marketing and Sales
Facsimile: +43 7672 701 3111 Marketing and Sales

Safety data sheet: s.astegger@lenzing.com

1.4 Emergency telephone

Lenzing fire brigade +43 7672 701 2500 (only in german) 24 hours

United Kingdom
UK: National Poison Information Service
(not for the public) +44 (0) 844 892 0111 24 hours
England: NHS direct (public) +44 (0) 845 4647 24 hours
Wales: NHS direct (public) +44 (0) 845 4647 24 hours
Scotland: NHS direct (public) +44 (0) 8454 242424 24 hours

Ireland
Poisons information center +353 (0) 1 8379964
of Ireland (for professionals) Dublin +353 (0) 1 8092566 24 hours

2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Information acc. GHS (1272/2008/EC)
not a harmful substance

Information acc. 67/548/EC and 1999/45/EC
not a harmful substance

2.2 Label elements

none

2.3 Other hazards

not a PBT substance
not a vPvB substance
no other hazards
3 COMPOSITION/INFORMATION ON INGREDIENTS

Name: Sodium sulphate  
Formula: Na₂SO₄  
CAS number: 7757-82-6  
Index number: none  
EINECS number: 231-820-9  
REACH registration number: 01-2119519226-43-0000

4 FIRST AID MEASURES

4.1 Description of first aid measures
Inhalation: Fresh air, rest  
Skin: Wash skin with water and soap  
Eyes: Rinse with plenty of water for several minutes (remove contact lenses if easily possible), refer for medical attention  
Ingestion: Drink water to dilute, look for medical help in case of ingestion large amounts

4.2 Most important symptoms and effects, both acute and delayed
oral taking: stomach-ache, diarrhoe, vomiting.

4.3 Indication of any immediate medical attention and special treatment needed
no special advise

5 FIRE FIGHTING MEASURES

5.1 Extinguishing media
Sodium sulphate is not inflammable. All extinguishing media are suitable.

5.2 Special hazards arising from the substance or mixture
Formulation of irritant or poisonous vapours at high temperatures

5.3 Advice for firefighters
no special advise

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Wear protective goggles and use dust mask P1 in dusty places.

6.2 Environmental protection
Remove spoiled material mechanically. Rinse with plenty of hot water.

6.3 Methods and material for containment and cleaning up
Remove spoiled material mechanically. Rinse with plenty of hot water.
6.4 Reference to other sections
refer to section 8 and 13

7 HANDLING AND STORAGE

7.1 Precautions for safe handling
Personal protection: dust mask P1, protective goggles, protection suit.

7.2 Conditions for safe storage, including any incompatibilities
Storage: Store dry. After moisture take-up volume will increase and agglomerations will be built.

7.3 Specific end use(s)
none

8 EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limits:

<table>
<thead>
<tr>
<th>EU (2009/161/EU)</th>
<th>no OEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom (Workplace exposure Limits EH40/2005)</td>
<td>no limit defined</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>dusts, non specific (OEL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>total inhalable</td>
</tr>
<tr>
<td>respirable</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

8.2.1 Appropriate engineering controls
Local exhaust ventilation when dust is generated

8.2.2 Individual protection measures, such as personal protective equipment

Respiratory protection: on dust formation: dust mask P1

<table>
<thead>
<tr>
<th>Hand protection:</th>
<th>glove material</th>
<th>nitrile-cotton</th>
<th>natural latex-chloroprene</th>
</tr>
</thead>
<tbody>
<tr>
<td>glove thickness</td>
<td>1.5mm</td>
<td>0.6mm</td>
<td></td>
</tr>
<tr>
<td>Break through time</td>
<td>480min</td>
<td>480min</td>
<td></td>
</tr>
<tr>
<td>type KCL</td>
<td>Tricotril 736</td>
<td>Lapren 706</td>
<td></td>
</tr>
</tbody>
</table>

The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN374, for example KCL 736 Tricotril or KCL 706 Lapren. The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN 374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet and supplied by us as well to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D- 36124 Eichenzell, Internet: www.kcl.de)

Eye-, face protection: safety goggles
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Body protection: usual work wear

General protective and hygiene measures: Remove contaminated clothing. Avoid eye and skin contact!

8.2.3 Environmental exposure controls
no chemical safety report necessary

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shape</td>
<td>powder</td>
</tr>
<tr>
<td>Colour</td>
<td>white</td>
</tr>
<tr>
<td>Odour</td>
<td>odourless</td>
</tr>
<tr>
<td>Melting point</td>
<td>884 °C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>unknown</td>
</tr>
<tr>
<td>Flash point</td>
<td>not inflammable</td>
</tr>
<tr>
<td>Ignition temp.</td>
<td>not inflammable</td>
</tr>
<tr>
<td>Flammability limits</td>
<td>not inflammable</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>unknown</td>
</tr>
<tr>
<td>Density</td>
<td>ca. 2.7 g/cm³ (20°C)</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>16 g/100 g solution</td>
</tr>
<tr>
<td>pH-value</td>
<td>5.5 – 9.5 (20°C) 10% solution</td>
</tr>
</tbody>
</table>

9.2 Other information
Na₂SO₄ is hygroscopic. In humid environment and in case of contact with water Dekahydrate (Na₂SO₄·10H₂O) will be formed. Volume will increase (maximum 4.17-fold).

10 STABILITY AND REACTIVITY

10.1 Reactivity
non reactive

10.2 Chemical stability
The product is chemically stable under standard ambient conditions.

10.3 Possibility of hazardous reactions
Contact of molten sodium sulphate (melting point 884 °C) with aluminium will cause violent reactions (formation of Al₂O₃, Na₂O and SO₂/SO₃-gas). Danger of explosion

10.4 Conditions to avoid
Temperatures higher than 890 °C (decomposition and formation of SO₂ and Na₂O).

10.5 Incompatible materials
Contact of molten sodium sulphate (melting point 884 °C) with aluminium will cause violent reactions (formation of Al₂O₃, Na₂O and SO₂/SO₃-gas). Danger of explosion

10.6 Hazardous decomposition products
Temperatures higher than 890 °C (decomposition and formation of SO₂ and Na₂O)
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11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

a) acute toxicity
   \( \text{LD}_{50} \) 6000 mg/kg mouse, oral
   \( \text{LDL}_{0} \) 4470 mg/kg rabbit, intravenous

b) skin corrosion/irritation
   no such properties

c) serious eye damage/irritation
   no such properties

d) respiratory or skin sensitisation
   no such properties

e) germ cell mutagenicity
   no such properties

f) carcinogenicity
   no such properties

g) reproductive toxicity
   no such properties

h) STOT-single exposure
   no such properties

i) STOT-repeated exposure
   no such properties

j) aspiration hazard
   no such properties

12 ECOLOGICAL INFORMATION

12.1 Toxicity
   WGK 1 (VwVwS Anhang 2)

   Fish toxicity: \( \text{LC}_{50} \) 13.5 g/L/95h Lepomis macrochirus
   Daphnia: \( \text{EC}_{50} \) 4547 mg/L/100h Daphnia magna
   Algae: \( \text{EC}_{50} \) 1900 mg/L/5d Nitzschia linearis

12.2 Persistence and degradability
   inorganic substance – not biodegradable

12.3 Bioaccumulative potential
   unknown

12.4 Mobility in soil
   unknown
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12.5 Results of PBT and vPvB assessment
no PBT or vPvB properties

12.6 Other adverse effects
none

13 DISPOSAL CONSIDERATIONS

category (acc. 91/689/EEC): 06 03 14

14 TRANSPORT INFORMATION

not a classified product

15 REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

not appropriate

not appropriate

not appropriate

COUNCIL DIRECTIVE 96/82/EC of 9 December 1996 on the control of major-accident hazards involving dangerous substances
not appropriate

not appropriate

not appropriate

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.
16 OTHER INFORMATION

- Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).
- Provide adequate information, instruction and training for operators.

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.