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

1.1 Product identifier
Trade name
Barium sulphate
Substance name barium sulfate, natural
Identification numbers
CAS no. 7727-43-7
EC no. 231-784-4

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses of the substance or mixture
chemical analysis
Uses advised against
No data available.

1.3 Details of the supplier of the safety data sheet
Address
ELTRA GmbH
Retsch-Allee 1-5
42781 Haan
GERMANY
Telephone no. +49 (0) 2104 23 33-400
Fax no. +49 (0) 2104 23 33-499
Information provided by / telephone
+49 (0) 2104 23 33-192
Advice on Safety Data Sheet
info@eltra.com

1.4 Emergency telephone number
For medical advice (in German and English):
+49 (0)551 192 40 (Giftinformationszentrum Nord)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification information
This product does not meet the classification and labelling criteria given in the Regulation (EC) No 1272/2008 (CLP).

2.2 Label elements
Not relevant

2.3 Other hazards
No data available.

SECTION 3: Composition/information on ingredients

3.1 Substances
Chemical characterization
Substance name barium sulfate, natural
Identification numbers
CAS no. 7727-43-7
EC no. 231-784-4

3.2 Mixtures
Not applicable. The product is not a mixture.
SECTION 4: First aid measures

4.1 Description of first aid measures

General information
In case of persisting adverse effects, consult a physician. Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing.

After inhalation
Remove affected person from the immediate area. Ensure supply of fresh air.

After skin contact
In case of contact with skin wash off immediately with soap and water.

After eye contact
Separate eyelids, wash the eyes thoroughly with water (15 min.). Get medical attention if pain still persists.

4.2 Most important symptoms and effects, both acute and delayed
No data available.

4.3 Indication of any immediate medical attention and special treatment needed
No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Extinguishing measures to suit surroundings.

Unsuitable extinguishing media
No data available.

5.2 Special hazards arising from the substance or mixture
In the event of fire, the following can be released: Sulphur oxides (SxOy)

5.3 Advice for firefighters
Use self-contained breathing apparatus. Wear protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Refer to protective measures listed in sections 7 and 8. Avoid contact with skin, eyes and clothing.

For emergency responders
No data available. Personal protective equipment (PPE) - see Section 8.

6.2 Environmental precautions
Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

6.3 Methods and material for containment and cleaning up
Take up mechanically. When collected, handle material as described under the section heading "Disposal considerations". Avoid raising dust.

6.4 Reference to other sections
Information regarding waste disposal, see chapter 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling
Provide good ventilation at the work area (local exhaust ventilation, if necessary). Avoid eye, skin and clothing contact. Avoid the formation and deposition of dust.
General protective and hygiene measures
Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Avoid contact with eyes and skin. Remove soiled or soaked clothing immediately. Do not inhale dust. Provide eye wash fountain in work area. After worktime and during work intervals the affected skin areas must be thoroughly cleaned.

Advice on protection against fire and explosion
The product is not combustible. Dust can form an explosive mixture with air. Take precautionary measures against static charges. Keep away from sources of ignition - refrain from smoking.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions
Keep container tightly closed in a cool, well-ventilated place.

Requirements for storage rooms and vessels
Always keep in containers of same material as the original.

7.3 Specific end use(s)
No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

<table>
<thead>
<tr>
<th>No</th>
<th>Substance name</th>
<th>CAS no.</th>
<th>EC no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dust</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>List of approved workplace exposure limits (WELs) / EH40</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dust respirable</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WEL long-term (8-hr TWA reference period)</td>
<td>4 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Comments</td>
<td>see Definition 44 &quot;Dust&quot;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>List of approved workplace exposure limits (WELs) / EH40</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dust inhalable</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WEL long-term (8-hr TWA reference period)</td>
<td>10 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Comments</td>
<td>see Definition 44 &quot;Dust&quot;</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>barium sulfate, natural</td>
<td>7727-43-7</td>
<td>231-784-4</td>
</tr>
</tbody>
</table>

List of approved workplace exposure limits (WELs) / EH40

<table>
<thead>
<tr>
<th>Substance name</th>
<th>CAS no.</th>
<th>EC no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium sulphate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>respirable dust</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WEL long-term (8-hr TWA reference period)</td>
<td>4 mg/m³</td>
<td></td>
</tr>
<tr>
<td>List of approved workplace exposure limits (WELs) / EH40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium sulphate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>total inhalable dust</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WEL long-term (8-hr TWA reference period)</td>
<td>10 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Appropriate engineering controls
No data available.

Personal protective equipment

Respiratory protection
If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of dust formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

Respiratory filter (part): P 1

Eye / face protection
Safety glasses (EN 166)

Hand protection
No special measures required.

Other
Normal chemical work clothing.
SECTION 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><strong>Form/Colour</strong></td>
<td>solid white</td>
</tr>
<tr>
<td><strong>Odour</strong></td>
<td>odourless</td>
</tr>
<tr>
<td><strong>pH value</strong></td>
<td>3.5 - 10.0</td>
</tr>
<tr>
<td><strong>Boiling point / boiling range</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Melting point / melting range</strong></td>
<td>1380 °C</td>
</tr>
<tr>
<td><strong>Decomposition point / decomposition range</strong></td>
<td>1580 °C</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Oxidising properties</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Explosive properties</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Lower flammability or explosive limits</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Upper flammability or explosive limits</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Vapour pressure</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Vapour density</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Density</strong></td>
<td>4.5 g/cm³</td>
</tr>
<tr>
<td><strong>Bulk density</strong></td>
<td>4.5 g/cm³</td>
</tr>
</tbody>
</table>
Value: approx. 500 kg/m³

Solubility in water:
- Value: < 0.1 g/l
- Reference temperature: 20 °C

Solubility(ies):
No data available.

Partition coefficient: n-octanol/water:
No data available.

Viscosity:
No data available.

9.2 Other information:
Other information:
No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity:
No data available.

10.2 Chemical stability:
Stable under recommended storage and handling conditions (See section 7).

10.3 Possibility of hazardous reactions:
With aluminium powder (heat) danger of explosion. Risk of ignition with: phosphorus; Exothermic reaction with: potassium.

10.4 Conditions to avoid:
No data available.

10.5 Incompatible materials:
No data available.

10.6 Hazardous decomposition products:
Sulphur oxides.

SECTION 11: Toxicological information

11.1 Information on toxicological effects:

<table>
<thead>
<tr>
<th>Acute oral toxicity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50</td>
<td>&gt; 20,000 mg/kg</td>
</tr>
<tr>
<td>Species</td>
<td>rat</td>
</tr>
<tr>
<td>Source</td>
<td>Literature value</td>
</tr>
</tbody>
</table>

Acute dermal toxicity:
No data available.

Acute inhalational toxicity:
No data available.

Skin corrosion/irritation:
No data available.

Serious eye damage/irritation:
No data available.

Respiratory or skin sensitisation:
No data available.

Germ cell mutagenicity:
No data available.

Reproduction toxicity:
No data available.
**Trade name:** Barium sulphate

**Carcinogenicity**
No data available

**STOT - single exposure**
No data available

**STOT - repeated exposure**
No data available

**Aspiration hazard**
No data available

**Symptoms related to the physical, chemical and toxicological characteristics**
Eye contact may cause mechanical irritation through dust particles.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**
Prolonged inhalation of excessive amounts of fine dust may cause lung damage.

**Other information**
Exercise customary precautions when handling chemicals.

### SECTION 12: Ecological information

#### 12.1 Toxicity

**Toxicity to fish (acute)**
No data available

**Toxicity to fish (chronic)**
No data available

**Toxicity to Daphnia (acute)**
No data available

**Toxicity to Daphnia (chronic)**
No data available

**Toxicity to algae (acute)**
No data available

**Toxicity to algae (chronic)**
No data available

**Bacteria toxicity**
No data available

#### 12.2 Persistence and degradability
No data available.

#### 12.3 Bioaccumulative potential
No data available.

#### 12.4 Mobility in soil
No data available.

#### 12.5 Results of PBT and vPvB assessment
No data available.

#### 12.6 Other adverse effects
No data available.

#### 12.7 Other information

*Ecological data are not available.*

Do not discharge product unmonitored into the environment.
SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging
Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

SECTION 14: Transport information

14.1 Transport ADR/RID/ADN
The product is not subject to ADR/RID/ADN regulations.

14.2 Transport IMDG
The product is not subject to IMDG regulations.

14.3 Transport ICAO-TI / IATA
The product is not subject to ICAO-TI / IATA regulations.

14.4 Other information
No data available.

14.5 Environmental hazards
Information on environmental hazards, if relevant, please see 14.1 - 14.3.

14.6 Special precautions for user
No data available.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
Not relevant

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)
In accordance with the Reach regulation (EC) 1907/2006, the product does not contain any substances that are considered as subject to listing in annex XIV, inventory of substances requiring authorisation.

REACH candidate list of substances of very high concern (SVHC) for authorisation
In accordance with article 57 and article 59 of the Reach regulation (EC) 1907/2006, this substance is not considered as subject to listing in annex XIV, inventory of substances requiring authorisation ("Authorization list").

The substance is not subject to the provisions of annex XVII (restriction entries) of the Reach regulation (EC) 1907/2006.

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances
This substance is not subject to Part I or 2 of Annex I

15.2 Chemical safety assessment
A chemical safety assessment has been carried out for this substance.

SECTION 16: Other information

Further information
Article no. 90821, 50 g

Sources of key data used to compile the data sheet:
Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case,
National Threshold Limit Values of the corresponding countries as amended in each case.
Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.
The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding chapter.

Department issuing safety data sheet
UMCO GmbH
Georg-Wilhelm-Str. 187, D-21107 Hamburg
Tel.: +49 40 / 555 546 300  Fax: +49 40 / 555 546 357  e-mail: umco@umco.de

This information is based on our present knowledge and experience.
The safety data sheet describes products with a view to safety requirements.
It does not however, constitute a guarantee for any specific product properties and shall not establish a legally valid contractual relationship.

Alterations/supplements:
Alterations to the previous edition are marked in the left-hand margin.

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