1. Identification

1.1. Product identifier

Product Code(s) 2008
Product Name BSA 96

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

Recommended use Refractory
Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Manufacturer Almatis GmbH
Lyoner Str. 9
60528 Frankfurt
Germany
+ 49 69 9573410

For further information, please contact info@almatis.com

1.4. Emergency telephone number

Emergency Telephone +1 501-776-4677 3E Global Incident Response Hotline (Almatis access code: 334735)

Emergency Telephone - §45 - (EC)1272/2008
Europe 112

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008
This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

2.2. Label elements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

Hazard statements
This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

2.3. Other hazards
No information available

3. Composition/information on ingredients
3.1 Substances

Not applicable

3.2 Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>EC No</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
<th>REACH registration number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum oxide</td>
<td>215-691-6</td>
<td>1344-28-1</td>
<td>&gt;95</td>
<td>-</td>
<td>01-2119529248-35-0024</td>
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<td>01-2119529248-35-0125</td>
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<td></td>
<td>01-2119529248-35-0087</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>236-675-5</td>
<td>13463-67-7</td>
<td>0.5-2</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Full text of H- and EUH-phrases: see section 16

4. First-aid measures

4.1. Description of first aid measures

Inhalation Remove to fresh air.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

Ingestion Clean mouth with water and drink afterwards plenty of water.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms Contact with dust can cause mechanical irritation or drying of the skin.

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-fighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media No information available.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical Avoid generation of dust. Fine dust dispersed in air may ignite.

5.3. Advice for firefighters
Special protective equipment for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions
Avoid generation of dust.

For emergency responders
Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions
See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment
Prevent further leakage or spillage if safe to do so.

Methods for cleaning up
Take up with inert, damp, non-combustible material using clean non-sparking tools and place into loosely covered plastic containers for later disposal. Pick up and transfer to properly labeled containers.

Prevention of secondary hazards
Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections
See section 8 for more information. See section 13 for more information.

7. Handling and storage

7.1. Precautions for safe handling

Advice on safe handling
Ensure adequate ventilation. Avoid generation of dust. Do not breathe dust.

General hygiene considerations
Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Risk Management Methods (RMM)
The information required is contained in this Material Safety Data Sheet.

8. Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>European Union</th>
<th>United Kingdom</th>
<th>France</th>
<th>Spain</th>
<th>Germany</th>
</tr>
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<tbody>
<tr>
<td>Aluminum oxide</td>
<td>1344-28-1</td>
<td>-</td>
<td>TWA: 10 mg/m³</td>
<td>TWA: 10 mg/m³</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>TWA: 4 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>-</td>
<td>TWA: 10 mg/m³</td>
<td>TWA: 10 mg/m³</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TWA: 4 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STEL: 30 mg/m³</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Biological occupational exposure limits

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Austria</th>
<th>Switzerland</th>
<th>Poland</th>
<th>Norway</th>
<th>Ireland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum oxide 1344-28-1</td>
<td>TWA: 5 mg/m³ STEL 10 mg/m³</td>
<td>TWA: 3 mg/m³ STEL 24 mg/m³</td>
<td>TWA: 2.5 mg/m³ TWA: 1.2 mg/m³ STEL: 15 mg/m³</td>
<td>TWA: 10 mg/m³ TWA: 4 mg/m³ STEL: 30 mg/m³ STEL: 12 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Titanium dioxide 13463-67-7</td>
<td>TWA: 5 mg/m³ STEL 10 mg/m³</td>
<td>TWA: 3 mg/m³ STEL: 30 mg/m³</td>
<td>TWA: 5 mg/m³ TWA: 10 mg/m³ STEL: 10 mg/m³</td>
<td>TWA: 10 mg/m³ TWA: 4 mg/m³ STEL: 30 mg/m³ STEL: 12 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering controls Apply technical measures to comply with the occupational exposure limits.

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Eye protection must conform to standard EN 166.

Hand protection Wear suitable gloves tested to EN 374.

Skin and body protection If there is a risk of contact:. Wear suitable protective clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls Avoid release to the environment. Avoid creating dust.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Powder granules Balls
Appearance No information available
Color light brown
Odor None.
Odor threshold No information available
Explosive properties
No information available

Oxidizing properties
No information available

9.2. Other information

Softening point
No information available

Molecular weight
No information available

VOC Content (%)
No information available

Liquid Density
3.4-3.6 g/cm³

Bulk density
800-2800 kg/m³

10. Stability and reactivity

10.1. Reactivity

Reactivity
No information available.

10.2. Chemical stability

Stability
Stable under normal conditions.

Explosion data

  Sensitivity to mechanical impact
  None.

  Sensitivity to static discharge
  None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions
None under normal processing.

10.4. Conditions to avoid

Conditions to avoid
Avoid dust formation.

10.5. Incompatible materials

Incompatible materials
None known based on information supplied.

10.6. Hazardous decomposition products
Hazardous decomposition products Not applicable.

11. Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

- **Inhalation**: Specific test data for the substance or mixture is not available.
- **Eye contact**: Specific test data for the substance or mixture is not available.
- **Skin contact**: Specific test data for the substance or mixture is not available.
- **Ingestion**: Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

- **Symptoms**: No information available.

Numerical measures of toxicity

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum oxide</td>
<td>&gt; 5000 mg/kg (Rat)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>&gt; 10000 mg/kg (Rat)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Delayed and immediate effects as well as chronic effects from short and long-term exposure

- **Skin corrosion/irritation**: No information available.
- **Serious eye damage/eye irritation**: No information available.
- **Respiratory or skin sensitization**: No information available.
- **Germ cell mutagenicity**: No information available.
- **Carcinogenicity**: No information available.
- **Reproductive toxicity**: No information available.
- **STOT - single exposure**: No information available.
- **STOT - repeated exposure**: No information available.
- **Aspiration hazard**: No information available.

12. Ecological information

12.1. Toxicity
Ecotoxicity
The environmental impact of this product has not been fully investigated.

12.2. Persistence and degradability
Persistence and degradability No information available.

12.3. Bioaccumulative potential
Bioaccumulation No information available.

12.4. Mobility in soil
Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>PBT and vPvB assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum oxide</td>
<td>The substance is not PBT / vPvB PBT assessment does not apply</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>The substance is not PBT / vPvB PBT assessment does not apply</td>
</tr>
</tbody>
</table>

12.6. Other adverse effects
Other adverse effects No information available.

13. Disposal considerations

13.1. Waste treatment methods
Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging Do not reuse empty containers.

14. Transport information

IMDG
14.1 UN number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Marine pollutant Not applicable
14.6 Special Provisions None
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code No information available

RID
14.1 UN number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards  Not applicable
14.6 Special Provisions  None

ADR
14.1 UN number  Not regulated
14.2 UN proper shipping name  Not regulated
14.3 Transport hazard class(es)  Not regulated
14.4 Packing group  Not regulated
14.5 Environmental hazards  Not applicable
14.6 Special Provisions  None

IATA
14.1 UN number  Not regulated
14.2 UN proper shipping name  Not regulated
14.3 Transport hazard class(es)  Not regulated
14.4 Packing group  Not regulated
14.5 Environmental hazards  Not applicable
14.6 Special Provisions  None

15. Regulatory information

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

European Union
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorizations and/or restrictions on use:
This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants
Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009  Not applicable

International Inventories

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Requirement</th>
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</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>Contact supplier for inventory compliance status</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>Contact supplier for inventory compliance status</td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td>Contact supplier for inventory compliance status</td>
</tr>
<tr>
<td>ENCS</td>
<td>Contact supplier for inventory compliance status</td>
</tr>
<tr>
<td>IECSC</td>
<td>Contact supplier for inventory compliance status</td>
</tr>
<tr>
<td>KECL</td>
<td>Contact supplier for inventory compliance status</td>
</tr>
<tr>
<td>PICCS</td>
<td>Contact supplier for inventory compliance status</td>
</tr>
<tr>
<td>AICS</td>
<td>Contact supplier for inventory compliance status</td>
</tr>
</tbody>
</table>

Legend:
- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS - Japan Existing and New Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- AICS - Australian Inventory of Chemical Substances
15.2. Chemical safety assessment

Chemical Safety Report No information available

16. Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend
SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION
TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)
Ceiling Maximum limit value * Skin designation

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEG L(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

Prepared By
Product Safety Department
Almatis B.V.
Theemsweg 30
3197 KM Botlek Rt
The Netherlands
+31-181-270124
info@almatis.com

Revision date 10-Jul-2019

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet