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

1.1. Product identifier

Product Code 2008
Product Name BSA 96
Contains Aluminum oxide, CAS 1344-28-1
Synonyms BSA-96, dense sintered refractory aggregate

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

Almatis GmbH Almatis GmbH
Lyoner Str. 9 Giulinistrasse 2
60528 Frankfurt 67065 Ludwigshafen
Germany Germany
Phone: +49 69 9573410 Phone: +49 621 57070

For further information, please contact

E-mail address info@almatis.com

1.4. Emergency telephone number

Emergency Telephone Number 3E Global Incident Response Hotline (Almatis access code: 334735)

GB: +44 20 35147487
UK: 0 800 680 0425
US: +01 760 476 3961
US: +01 760 476 3959

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008
Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Classification according to Regulation (EC) No. 1272/2008 [CLP]
No data available

Not applicable

2.2. Label Elements

Symbol(s)
Not applicable
Signal word
None

Hazard statements
None

2.3. Other information
No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No.</th>
<th>Weight-%</th>
<th>REACH Reg. No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum oxide</td>
<td>1344-28-1</td>
<td>&gt;95</td>
<td>01-2119529248-35-0034</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>01-2119529248-35-0125</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>01-2119529248-35-0086</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>01-2119529248-35-0238</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>0.5-2.0</td>
<td></td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

4.1. Description of first aid measures

Eye Contact
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Skin Contact
Wash skin with soap and water.

Ingestion
Rinse mouth

Inhalation
Remove to fresh air

General Advice
If symptoms persist, call a physician
Show this safety data sheet to the doctor in attendance

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

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

Notes to Physician
Treat symptomatically

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media
The product itself does not burn
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

Extinguishing media which must not be used for safety reasons
No information available

5.2. Special hazards arising from the substance or mixture

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases
None in particular.

5.3. Advice for firefighters

Special protective equipment for fire-fighters
As in any fire, wear self-contained breathing apparatus and full protective gear.
6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures
Wear personal protective equipment
Avoid dust formation

6.2. Environmental precautions
No special environmental precautions required

6.3. Methods and material for containment and cleaning up
Recover product. Place into appropriate container for disposal.

Methods for Cleaning Up
Sweep up and shovel into suitable containers for disposal

6.4. Reference to other sections
See Section 12 for additional information.

7. HANDLING AND STORAGE

7.1. Precautions for Safe Handling
Handling
Provide appropriate exhaust ventilation at places where dust is formed

General Hygiene Considerations
Handle in accordance with good industrial hygiene and safety practice

Exposure scenario
No information available

7.2. Conditions for safe storage, including any incompatibilities
Keep in a dry place
Protect from moisture.

7.3. Specific end use(s)
No information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>EU</th>
<th>United Kingdom</th>
<th>France</th>
<th>Spain</th>
<th>Germany OEL (TWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum oxide 1344-28-1</td>
<td></td>
<td></td>
<td>VME: 10 mg/m³</td>
<td>VLA-ED: 10 mg/m³</td>
<td>1.25 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6.0 mg/m³(a)</td>
</tr>
<tr>
<td>Titanium dioxide 13463-67-7</td>
<td></td>
<td>TWA: 10 mg/m³</td>
<td>TWA: 10 mg/m³</td>
<td>VLA-ED: 10 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>VME: 10 mg/m³</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(a) GOEL - Germany - TRGS 900 - Occupational Exposure Limits - TWAs, (a) exempt facilities listed in 2.4(8) and (9)

<table>
<thead>
<tr>
<th>Component</th>
<th>Italy</th>
<th>Portugal</th>
<th>Netherlands</th>
<th>Finland</th>
<th>Denmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum oxide 1344-28-1</td>
<td></td>
<td>TWA: 10 mg/m³</td>
<td></td>
<td>TWA: 10 mg/m³</td>
<td></td>
</tr>
<tr>
<td>( &gt;95 )</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Titanium dioxide 13463-67-7</td>
<td></td>
<td>TWA: 10 mg/m³</td>
<td></td>
<td>TWA: 6 mg/m³</td>
<td></td>
</tr>
<tr>
<td>( 0.5-2.0 )</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>OSHA PEL</th>
<th>ACGIH TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum oxide 1344-28-1 ( &gt;95 )</td>
<td>15 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable fraction)</td>
<td>1 mg/m³ TWA (respirable fraction)</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>15 mg/m³ TWA (total dust)</td>
<td>10 mg/m³ TWA</td>
</tr>
</tbody>
</table>
8.2. Exposure controls

Personal protective equipment

Eye Protection
Wear safety glasses with side shields (or goggles)

Skin Protection
No special protective equipment required.

Hand Protection
No special protective equipment required.

Respiratory Protection
In case of insufficient ventilation, wear suitable respiratory equipment
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators

Environmental exposure controls
No information available

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State
Powder, Granules, Balls

Color
Light brown

Odor
None

pH
9.00 - 10.50

Flash point (°C) DEGREES
Not applicable

Autoignition temp (°F) DEGREES
Does not ignite

Boiling point/range (°C) DEGREES
Not determined

Melting Point/Range

Melting point (°C) VALUE
>1600

Melting point (°C) DEGREES
°C

Solubility
Insoluble

Density
3.4-3.6 g/cm³

Bulk Density
800-2800 kg/m³

10. STABILITY AND REACTIVITY

10.1. Reactivity
None under normal processing

10.2. Chemical Stability
Stable under normal conditions

10.3. Possibility of Hazardous Reactions
None under normal processing

10.4. Conditions to Avoid
None under normal processing

10.5. Incompatible materials
None under normal processing

10.6. Hazardous Decomposition Products
Not applicable

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects
Acute Toxicity
Acute toxicity - Oral
Conclusive but not sufficient for classification

Acute toxicity - Dermal
Conclusive but not sufficient for classification

Acute toxicity - Inhalation (Dusts/Mists)
Conclusive but not sufficient for classification

Chronic Toxicity

Irritation
Conclusive but not sufficient for classification

Corrosivity
Conclusive but not sufficient for classification

Sensitization
Conclusive but not sufficient for classification

Mutagenic Effects
Conclusive but not sufficient for classification

Carcinogenic effects
Conclusive but not sufficient for classification

Reproductive Effects
Conclusive but not sufficient for classification

Developmental Effects
Conclusive but not sufficient for classification

Target Organ Effects
Respiratory system

Aspiration Hazard
Conclusive but not sufficient for classification

12. ECOLOGICAL INFORMATION

12.1. Toxicity
Ecotoxicity effects
Not water endangering

12.2. Persistence and degradability
No information available

12.3. Bioaccumulative potential
No information available

12.4. Mobility in soil
No information available

12.5. Results of PBT and vPvB assessment
No information available

12.6. Other adverse effects

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods
Waste from Residues/Unused Products
Disposal should be in accordance with applicable regional, national and local laws and regulations

Contaminated Packaging
Empty containers should be taken to an approved waste handling site for recycling or disposal

14. TRANSPORT INFORMATION

Note: Not classified as dangerous in the meaning of transport regulations

IMDG/IMO Not regulated.
RID Not regulated.
ADR Not regulated
ICAO Not regulated
IATA Not regulated
15. REGULATORY INFORMATION

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

International Inventories

<table>
<thead>
<tr>
<th>Regulation</th>
<th>Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>Complies</td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td>Complies</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>Complies</td>
</tr>
<tr>
<td>PICCS</td>
<td>Complies</td>
</tr>
<tr>
<td>ENCS</td>
<td>Complies</td>
</tr>
<tr>
<td>IECSC</td>
<td>Complies</td>
</tr>
<tr>
<td>AICS</td>
<td>Complies</td>
</tr>
<tr>
<td>KECL</td>
<td>Complies</td>
</tr>
</tbody>
</table>

Legend

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

15.2. Chemical Safety Assessment

A Chemical Safety Assessment has been carried out

16. OTHER INFORMATION

Key literature references and sources for data

www.ChemADVISOR.com/

Prepared By

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Revision Note

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Updated Prepared By

Updates

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End of Safety Data Sheet