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

1.1. Product identifier

Product Code
839

Product Name
ALUMINUM TRIHYDROXIDE

Contains
Aluminum hydroxide, CAS 21645-51-2

Synonyms
AB Dxx Series, BayGranite(R) Series, Dry Hydrate, FlameGard(R) Series

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

Recommended Use
Fire retarding agent, Filler, Water treatment

Uses advised against
No information available

1.3. Details of the supplier of the safety data sheet

Almatis GmbH
Lyoner Str. 9
60528 Frankfurt
Germany

Almatis, Inc.
P.O. Box 300
4701 Alcoa Road
Bauxite, AR 72022 USA

Almatis, Inc.
P.O. Box 1601
1532 Rocky Face R/R St.
Rocky Face (Dalton), GA 30740 USA

Almatis Burnside, Inc.
41237 Hwy 22
Burnside, LA 70738, USA

For further information, please contact

Emergency telephone number
Almatis: +1 501-776-4677

CHEMTREC:
+1-703-527-3887 (INTERNATIONAL)
+1-800-424-9300 (NORTH AMERICA)

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008
The product is not classified as dangerous according to Regulation (EC) No. 1272/2008

Classification according to Directive 67/548/EEC or 1999/45/EC
Not classified

R-Phrases
Not applicable

GHS Classification
The product is not classified as hazardous according to GHS

2.2. Label Elements

Symbol(s)
Not applicable
Signal Word
None

Hazard Statements
None

Precautionary Statements
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
P280 - Wear eye protection/face protection
P285 - In case of inadequate ventilation wear respiratory protection
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

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 hydroxide</td>
<td>21645-51-2</td>
<td>&gt;90</td>
<td>01-2119528246-39-0047</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 doctor
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

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

Methods for Cleaning Up
Shovel or sweep up

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 hydroxide</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.0 mg/m³</td>
</tr>
<tr>
<td>21645-51-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6.0 mg/m³ (a)</td>
</tr>
</tbody>
</table>

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>OSHA PEL</th>
<th>ACGIH TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum hydroxide</td>
<td>= 15 mg/m³ TWA total dust</td>
<td>1 mg/m³ TWA (respirable fraction)</td>
</tr>
<tr>
<td>21645-51-2 ( &gt;90 )</td>
<td>= 5 mg/m³ TWA respirable fraction</td>
<td></td>
</tr>
</tbody>
</table>
Derived No Effect Level (DNEL)  
3 mg/m³, respirable, 8 hour TWA

Predicted No Effect Concentration (PNEC)  
No information available

8.2. Exposure controls

Engineering Controls  
Ensure adequate ventilation, especially in confined areas

Personal protective equipment  

Eye Protection  
safety glasses with side-shields

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

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Powder</td>
</tr>
<tr>
<td>Colour</td>
<td>White</td>
</tr>
<tr>
<td>Odour</td>
<td>None</td>
</tr>
<tr>
<td>pH</td>
<td>8.5 - 10.2</td>
</tr>
<tr>
<td>Flash point (°C) DEGREES</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Autoignition temp (°F) DEGREES</td>
<td>does not ignite</td>
</tr>
<tr>
<td>Boiling point/range (°C) DEGREES</td>
<td>Not determined</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>Liquid at room temperature</td>
</tr>
<tr>
<td>Melting point (°C) DEGREES</td>
<td>Soluble in strong acids and strong bases</td>
</tr>
<tr>
<td>Solubility</td>
<td>2.42 g/cm³</td>
</tr>
<tr>
<td>Density</td>
<td>0.15-1.3 g/cm³</td>
</tr>
<tr>
<td>Bulk Density</td>
<td></td>
</tr>
</tbody>
</table>

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  
Heating the material above 200°C will result in a sudden release of water vapor (steam). Precautions must be taken to dissipate the vapor and any pressure that may be generated. A sudden increase in pressure could cause damage or explosion in enclosed equipment.

10.4. Conditions to Avoid  
No information available

Incompatible materials  
None under normal processing

10.6. Hazardous Decomposition Products  
Steam
11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute Toxicity

- **Acute oral toxicity**: Conclusive but not sufficient for classification
- **Acute dermal toxicity**: Conclusive but not sufficient for classification
- **Acute inhalation toxicity**: Conclusive but not sufficient for classification

Chronic Toxicity

- **Irritation**: Conclusive but not sufficient for classification
- **Corrosivity**: Conclusive but not sufficient for classification
- **Sensitisation**: 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
- **Aspiration Hazard**: Conclusive but not sufficient for classification

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity effects
- Not water endangering (WGK: nwg)

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

None known

13. DISPOSAL CONSIDERATIONS

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
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>Status</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/

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Revision Date 06/26/2015
Revision Summary

Revision 6, April 2008
Section 1, changed contact address
Section 16, added email address and revision history
Revision 7, May 2011
Update to format
Revision 8, August 2012
Removed products no longer manufactured by Almatis, contact Huber Specialty Hydrates LLC for additional information on discontinued products
Revision 9, February 2014
Section 8, revised ACGIH TWA
Revision 10, August 2014
Section 8, revised GOEL
Revision 11, September 2014
Section 3, added REACH registration number
Revision 12, June 2015
Section 1, added AB Dxx Series and Dry Hydrate to synonyms
Section 1, added Water treatment
Section 1, added Burnside location

Updates

The most current version of this Safety Data Sheet is available at this URL:

This 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