1. Identification

Product identifier

Product Name
CALCIUM ALUMINATE CEMENT

Other means of identification

Product Code(s)
993

Synonyms
None

Recommended use of the chemical and restrictions on use

Recommended use
Hydraulic binder. Used for production of refractory concretes and mortars and as ingredient of building chemistry products.

Restrictions on use
No information available

Details of the supplier of the safety data sheet

Supplier Address
Almatis, Inc.
P.O. Box 300
4701 Alcoa Road
Bauxite, AR 72022
USA
Telephone: +1 501-776-4677

Manufacturer Address
Almatis B.V.
Theemsweg 30
NL-3197 KM Botlek Rt
The Netherlands
Phone: +31 181270129

Emergency telephone number

Emergency Telephone
US:+1 760 476 3960

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Hazards not otherwise classified (HNOC)
Not applicable

Label elements

Hazard statements

Precautionary Statements - Prevention
Not applicable

Precautionary Statements - Response
Not applicable
3. Composition/information on ingredients

Substance
Not applicable.

Mixture
Common name Calcium Aluminate cement.
Synonyms CA-14 M CA-14 S CA-14 W CA-25 C CA-25 M CA-25 R CA-270 CA-470 TI CA-670 CA-680 CAC DISCHARGE CARO WHITE.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No.</th>
<th>Weight-%</th>
<th>Trade secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium aluminate</td>
<td>65997-16-2</td>
<td>40-100</td>
<td>*</td>
</tr>
<tr>
<td>Aluminum oxide</td>
<td>1344-28-1</td>
<td>0-50</td>
<td>*</td>
</tr>
</tbody>
</table>

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

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.

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

Most important symptoms and effects, both acute and delayed

Symptoms Mild eye irritant. Mild skin irritant.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-fighting measures

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

Unsuitable extinguishing media No information available.
Specific hazards arising from the chemical

Avoid generation of dust.

Explosion data
- Sensitivity to mechanical impact: None.
- Sensitivity to static discharge: None.

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

Personal precautions, protective equipment and emergency procedures

Personal precautions

Ensure adequate ventilation. Avoid generation of dust. Do not breathe dust.

Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so. Prevent dust cloud.

Methods for cleaning up

Sweep up and shovel into suitable containers for disposal. Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling

Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid generation of dust. Ensure adequate ventilation.

Conditions for safe storage, including any incompatibilities

Storage Conditions

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

8. Exposure controls/personal protection

Control parameters

Exposure Limits

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum oxide</td>
<td>TWA: 1 mg/m³ respirable particulate matter</td>
<td>TWA: 15 mg/m³ total dust</td>
<td></td>
</tr>
<tr>
<td>1344-28-1</td>
<td></td>
<td>TWA: 5 mg/m³ respirable fraction (vacated)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA: 10 mg/m³ total dust (vacated)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA: 5 mg/m³ respirable fraction</td>
<td></td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering controls

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection

No special protective equipment required.

Skin and body protection

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.

## 9. Physical and chemical properties

**Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>White to off-white Powder</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>White to off-white</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>11.3 - 11.5</td>
<td>aqueous solution</td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>1650 - 1820 °C</td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Upper flammability or explosive limits</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Lower flammability or explosive limits</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Water solubility</td>
<td>insoluble</td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>-</td>
<td>Does not ignite</td>
</tr>
<tr>
<td>Hyphen</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>No data available</td>
<td>None known</td>
</tr>
</tbody>
</table>

### Other information

- Explosive properties: No information available
- Oxidizing properties: No information available
- Softening point: No information available
- Molecular weight: No information available
- VOC Content (%): No information available
- Liquid Density: 2.8-3.3 g/cm³
- Bulk density: 750-1100 kg/m³

## 10. Stability and reactivity

- Reactivity: None under normal processing.
- Chemical stability: Stable under normal conditions.
- Possibility of hazardous reactions: Contact with water generates heat.
- Hazardous polymerization: None under normal processing.
- Conditions to avoid: Avoid accumulation of airborne dust.
- Incompatible materials: None known based on information supplied.
Hazardous decomposition products None under normal processing.

11. Toxicological information

Information on likely routes of exposure

Product Information

<table>
<thead>
<tr>
<th>Route</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>May cause irritation.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Dust contact with the eyes can lead to mechanical irritation. Mild eye irritation.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Causes mild skin irritation.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No known hazard by swallowing.</td>
</tr>
</tbody>
</table>

Symptoms related to the physical, chemical and toxicological characteristics

| Symptoms                          | No information available.                                       |

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document.

<table>
<thead>
<tr>
<th>Component Information</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum oxide 1344-28-1</td>
<td>&gt; 5000 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

<table>
<thead>
<tr>
<th>Effect</th>
<th>No information available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
<td></td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td></td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td></td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td></td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td></td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td></td>
</tr>
<tr>
<td>STOT - single exposure</td>
<td></td>
</tr>
<tr>
<td>STOT - repeated exposure</td>
<td></td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td></td>
</tr>
<tr>
<td>Other adverse effects</td>
<td></td>
</tr>
<tr>
<td>Interactive effects</td>
<td></td>
</tr>
</tbody>
</table>

12. Ecological information
Ecotoxicity  
Not considered to be harmful to aquatic life.

Persistence and degradability  
Not readily biodegradable.

Bioaccumulation  
Does not bioaccumulate.

Mobility  
No information available.

Other adverse effects  
No information available.

### 13. Disposal considerations

**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

**DOT**  
Not regulated

**TDG**  
Not regulated

**MEX**  
Not regulated

**ICAO (air)**  
Not regulated

**IATA**  
Not regulated

**IMDG**  
Not regulated

**RID**  
Not regulated

**ADR**  
Not regulated

**ADN**  
Not regulated

### 15. Regulatory information

**International Inventories**

- **TSCA**  
  Complies.

- **DSL/NDSL**  
  Listed on DSL.

- **EINECS/ELINCS**  
  Complies.

- **ENCS**  
  Does not comply.

- **IECSC**  
  Complies.

- **KECL**  
  Complies.

- **PICCS**  
  Does not comply.

- **AICS**  
  Complies.

**Legend:**
US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum oxide - 1344-28-1</td>
<td>1.0</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard classifications.

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum oxide</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>1344-28-1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

U.S. EPA Label Information

EPA Pesticide Registration Number  Not applicable

16. Other information

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health hazards</th>
<th>Flammability</th>
<th>Physical hazards</th>
<th>Personal protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>X</td>
</tr>
</tbody>
</table>

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