

# Material Safety Data Sheet

## Calcium Aluminate Cements

### 1. Product and company identification

**Product name** : Calcium Aluminate Cements  
**Trade name** : Lumnite MG, Lumnite MG 4, Lumnite, Refcon MG, and Refcon  
**Material uses** : Not available.  
**Supplier/Manufacturer** : Calucem, Inc.  
7540 Windsor Way, Suite 304  
Allentown, PA 18195  
Product Information Number: 484-223-2950  
**Validation date** : 06/15/2008  
**Responsible name** : Calucem, Inc.  
**In case of emergency** : 484-223-2950

### 2. Hazards identification

**Physical state** : Solid. [Powder.]  
**Odor** : Odorless.  
**Emergency overview** : NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.  
No known significant effects or critical hazards. Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat. Avoid prolonged contact with eyes, skin and clothing.

#### Potential acute health effects

**Inhalation** : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.  
**Ingestion** : No known significant effects or critical hazards.  
**Skin** : No known significant effects or critical hazards.  
**Eyes** : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

#### Potential chronic health effects

**Chronic effects** : No known significant effects or critical hazards.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Teratogenicity** : No known significant effects or critical hazards.  
**Developmental effects** : No known significant effects or critical hazards.  
**Fertility effects** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

**Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
**Ingestion** : No specific data.  
**Skin** : No specific data.  
**Eyes** : Adverse symptoms may include the following:  
irritation  
redness

**Medical conditions aggravated by over-exposure** : None known.

See toxicological information (section 11)

### 3. Composition/information on ingredients

#### United States

Name	CAS number	%
Cement, alumina, chemicals	65997-16-2	100
Contains		
CaO - Al <sub>2</sub> O <sub>3</sub>	12042-68-1	
CaO - 2 Al <sub>2</sub> O <sub>3</sub>	12004-08-9	
4CaO - Al <sub>2</sub> O <sub>3</sub> - Fe <sub>2</sub> O <sub>3</sub>	12068-35-8	
2CaO - Al <sub>2</sub> O <sub>3</sub> - SiO <sub>2</sub>	12068-46-1	
4CaO - Al <sub>2</sub> O <sub>3</sub> - SO <sub>3</sub>	12004-11-4	

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

### 4. First aid measures

Eye contact	: Check for and remove any contact lenses. In case of contact with eyes, rinse immediately with plenty of water. Get medical attention if symptoms occur.
Skin contact	: Wash with soap and water. Get medical attention if symptoms occur.
Inhalation	: If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms appear.
Ingestion	: Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training.
Notes to physician	: No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

### 5. Fire-fighting measures

Flammability of the product	: No specific fire or explosion hazard.
Extinguishing media	
Suitable	: Use an extinguishing agent suitable for the surrounding fire.
Not suitable	: None known.
Hazardous thermal decomposition products	: No specific data.
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

### 6. Accidental release measures

Personal precautions	: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
Environmental precautions	: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods for cleaning up	
Small spill	: Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

## 6. Accidental release measures

- Large spill** : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

## 7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## 8. Exposure controls/personal protection

Consult local authorities for acceptable exposure limits.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
- Engineering measures** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Personal protection**
- Eyes** : Safety glasses.
- Skin** : Lab coat.
- Respiratory** : A respirator is not needed under normal and intended conditions of product use.
- Hands** : Disposable vinyl gloves.
- Personal protective equipment (Pictograms)** :
- 
- HMIS Code/Personal protective equipment** : A
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## 9. Physical and chemical properties

Physical state	: Solid. [Powder.]
Color	: Brown.
Odor	: Odorless.
Relative density	: 3.15
Solubility	: Very slightly soluble in the following materials: cold water and hot water.

## 10. Stability and reactivity

Stability	: The product is stable.
Hazardous polymerization	: Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid	: No specific data.
Materials to avoid	: Reactive or incompatible with the following materials: oxidizing materials.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 11. Toxicological information

Acute toxicity	
Inhalation	: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
Ingestion	: No known significant effects or critical hazards.
Skin	: No known significant effects or critical hazards.
Eyes	: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

## 12. Ecological information

Environmental effects	: No known significant effects or critical hazards.
Other adverse effects	: No known significant effects or critical hazards.

## 13. Disposal considerations

Waste disposal	: The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
----------------	---

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

## 14. Transport information

AERG	: Not applicable.
Regulatory information	
DOT/IMDG/IATA	: Not regulated.

## 15 . Regulatory information

**United States**

**HCS Classification** : Not regulated.

**U.S. Federal regulations** : **United States inventory (TSCA 8b)**: All components are listed or exempted.  
**SARA 302/304/311/312 extremely hazardous substances**: No products were found.  
**SARA 302/304 emergency planning and notification**: No products were found.  
**SARA 302/304/311/312 hazardous chemicals**: No products were found.  
**SARA 311/312 MSDS distribution - chemical inventory - hazard identification**: No products were found.  
**Clean Water Act (CWA) 307**: No products were found.  
**Clean Water Act (CWA) 311**: No products were found.  
**Clean Air Act (CAA) 112 accidental release prevention**: No products were found.  
**Clean Air Act (CAA) 112 regulated flammable substances**: No products were found.  
**Clean Air Act (CAA) 112 regulated toxic substances**: No products were found.

**State regulations**

: **Connecticut Carcinogen Reporting**: None of the components are listed.  
**Connecticut Hazardous Material Survey**: None of the components are listed.  
**Florida substances**: None of the components are listed.  
**Illinois Chemical Safety Act**: None of the components are listed.  
**Illinois Toxic Substances Disclosure to Employee Act**: None of the components are listed.  
**Louisiana Reporting**: None of the components are listed.  
**Louisiana Spill**: None of the components are listed.  
**Massachusetts Spill**: None of the components are listed.  
**Massachusetts Substances**: None of the components are listed.  
**Michigan Critical Material**: None of the components are listed.  
**Minnesota Hazardous Substances**: None of the components are listed.  
**New Jersey Hazardous Substances**: None of the components are listed.  
**New Jersey Spill**: None of the components are listed.  
**New Jersey Toxic Catastrophe Prevention Act**: None of the components are listed.  
**New York Acutely Hazardous Substances**: None of the components are listed.  
**New York Toxic Chemical Release Reporting**: None of the components are listed.  
**Pennsylvania RTK Hazardous Substances**: None of the components are listed.  
**Rhode Island Hazardous Substances**: None of the components are listed.

**California Prop. 65**

No products were found.

**International regulations**

**International lists** : This product, (and its ingredients) is (are) listed on national inventories, or is (are) exempted from being listed, in Australia (AICS), in Europe (EINECS/ELINCS), in Korea (TCCL), in Japan (METI), in the Philippines (RA6969).

## 16 . Other information

**Label requirements** : NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

**Hazardous Material Information System (U.S.A.)**

Fire hazard	0
Personal protection	A

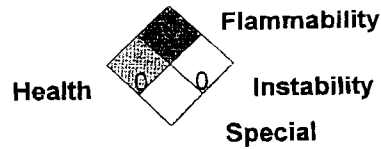
**HAZARD RATINGS**

- 4- Extreme
- 3- Serious
- 2- Moderate
- 1- Slight
- 0- Minimal

See section 8 for more detailed information on personal protection.

The customer is responsible for determining the PPE code for this material.

**National Fire Protection Association (U.S.A.)** :

**16 . Other information**

**References** : ANSI Z400.5, MSDS Standard, 2004. - Manufacturer's Material Safety Data Sheet. -  
29CFR Part1910.1200 OSHA MSDS Requirements. - 49CFR Table List of Hazardous  
Materials, UN#, Proper Shipping Names, PG.

**Date of issue** : 06/15/2008  
**Date of previous issue** : 05/31/2007  
**Version** : 2

**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.