

CALCIUM ALUMINATE PRODUCTS

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1. Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier****Trade name** : CALCIUM ALUMINATE CEMENT "ELECTROLAND" (UNE-EN 14647:2006)
HEATPROOF PRODUCT "ALUMINITE"**Product code** : -

* **Identification of the product** : Cement, alumina, chemicals
CAS No :065997-16-2
EC No :266-045-5
Index No :---
Cement clinker is exempt from registration (Art 2.7 (b) and Annex V.10 of REACH).

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

* **Use** : Aluminous cement clinker is used for the production of high alumina cements and special aggregates (high temperature resistant, abrasion and chemical corrosion).

Company identification : Cementos Molins Industrial, S.A.
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1.4. Emergency telephone number**Phone nr** : +34 93 680 60 30 [Office hours]**2. Hazards identification****2.1. Classification of the substance or mixture****Classification EC 67/548 or EC 1999/45**

Not classified.

Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)

* Not classified.

2.2. Label elements**Labelling EC 67/548 or EC 1999/45**

Not classified.

Symbol(s) : None.**R Phrase(s)** : None.**S Phrase(s)** : None.**Labelling Regulation EC 1272/2008 (CLP)**

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2. Hazards identification (continued)

- * Not classified.
- * **Hazard pictograms** : None.
- * **Signal words** : None.
- * **Hazard statements** : None.
- * **Precautionary statements** : None.

2.3. Other hazards

- * **Other hazards** : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.
Aluminous cement clinker dust like any general dust may cause irritation of the respiratory system

3. Composition/information on ingredients

- * **Substance / Preparation** : Cement, alumina, chemicals
CAS No :065997-16-2
EC No :266-045-5
Index No :---
Aluminous cement clinker is a multiconstituent substance consisting of at least one among 4 main clinker phases (CaAl₂O₄, Ca₄Al₂Fe₂O₁₀, Ca₁₂Al₁₄O₃₃, and Ca₂SiO₄) as well as other minor compounds, all confined in a crystalline mass.
- * **Hazardous component(s)** : Contains neither soluble chromium VI (in excess of 2 ppm) nor crystalline silica.
This product contains no hazardous components.
- * : *Hydraulic binder of these products is manufactured by fusion of a mixture exactly defined of aluminous and lime materials. It is composed mainly by calcium aluminates that, once hydrated, gives harden properties.*

4. First aid measures**4.1. Description of first aid measures**

- * **Inhalation** : Assure fresh air breathing. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists or later develops or if discomfort coughing or other symptoms persist.
- * **Skin contact** **Dry cement. :**
: Remove of the skin Rinse immediately with plenty of water.
Wet cement. :
: Rinse immediately with plenty of water. Remove contaminated clothing and shoes. Wash clothing before re-using. Seek medical treatment in all cases of irritation or burns
- * **Eye contact** : Do not rub eye. Direct contact with product may cause corneal damage by mechanical stress. Make sure to remove the contact lenses. Rinse immediately with plenty of water. / NaCl (0.9%) (20min) Ensure adequate flushing of eyes by separating eyelids with the fingers. Contact ophthalmologist immediately.
- * **Ingestion** : Do NOT induce vomiting. Rinse mouth with water (only if the person is conscious). Give large quantities of water. Seek medical attention immediately.

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

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4. First aid measures (continued)

- * **Symptoms relating to use** : Frequent inhalation of large quantities of cement dust over a long period of time increases the risk of developing lung diseases.
Direct contact with the eyes is likely irritating.

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

- * **General information** : No personal protective equipment is needed for first aid responders. First aid workers should avoid contact with wet Aluminous cement clinker or wet Aluminous cement clinker containing preparations. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

5. Fire-fighting measures**5.1. Extinguishing media**

- * **Suitable extinguishing media** : Non flammable.
* **Surrounding fires** : The product, when fire, allows the use of all extinguish media.
Use water spray or fog for cooling exposed containers.

5.2. Special hazards arising from the substance or mixture

- * **Special hazards arising from the substance or mixture** : Product will not support combustion of other materials. Not explosive. Not flammable.
Specific hazards : It poses no fire-related hazards.

5.3. Advice for fire-fighters

- * **Protection against fire** : No need for special protective equipment for fire fighters.
Special procedures : Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

6. Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

- * **For emergency responders** : Emergency procedures are not required. Where excessive dust may result, use approved respiratory protection equipment.
* **For non-emergency personnel** : Wear proper protective equipment. See section 7, 8.

6.2. Environmental precautions

Environmental precautions : Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- * **Clean up methods** : *Collect spilled material and use it.*
: Use dry cleanup methods such as vacuum clean-up or vacuum extraction (Industrial portable units, equipped with high efficiency particulate filters (HEPA filter) or equivalent technique), which do not cause airborne dispersion. Do not use

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6. Accidental release measures (continued)

compressed air for cleaning. Equip rescue crew with proper protection. Minimize generation of dust. Avoid : Inhalation of dust. Collect spills and put it into appropriated container.

6.4. Reference to other sections

See section 8. 13.

7. Handling and storage**7.1. Precautions for safe handling**

- * **Handling**
 - : See section 8, 6.3. Avoid dust dispersion. Do not sweep. Use dry cleanup methods such as vacuum clean-up or vacuum extraction (Industrial portable units, equipped with high efficiency particulate filters (HEPA filter) or equivalent technique), which do not cause airborne dispersion. Wear suitable gloves and eye/face protection. When using, do not eat, drink or smoke.
 - : *For (bagged) product used in open-ended mixers: first add the water and then carefully add the product. Keep the height of the fall low. Start the mixing smoothly. Do not compress empty bags, except when contained in another clean bag.*
 - : *Carrying product bags may cause sprains and strains to the back, arms, shoulders and legs. Handle with care and use appropriate control measures.*

7.2. Conditions for safe storage, including any incompatibilities

Storage : Bulk product should be stored in silos that are waterproof, dry (internal condensation minimised), clean and protected from contamination. Engulfment hazard: To prevent burial or suffocation, do not enter a confined space, such as a silo, bin, bulk truck, or other storage container or vessel that stores or contains product without taking the proper security measures. Product can build-up or adhere to the walls of a confined space. The product can release, collapse or fall unexpectedly. Bags should be stacked in a stable manner. Keep away from food, drink and animal feeding stuffs.

Storage - away from : Not established.

7.3. Specific end use(s)

- * **Specific end use(s)** : See section 1.

8. Exposure controls/personal protection**8.1. Exposure controls****Personal protection**

- * **Personal protection**
 - : Avoid all unnecessary exposure. Wash hands and other exposed areas with soap and water before leaving work. Wash clothing before re-using.
 - : *During work avoid kneeling in fresh mortar or concrete wherever possible. If kneeling is absolutely necessary then appropriate waterproof personal protective equipment must be worn.*

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8. Exposure controls/personal protection (continued)

- **Respiratory protection** : Where excessive dust may result, wear dust respirator. Conform to the relevant EN standard.
- **Skin protection** : Use impervious, abrasion and alkali resistant gloves. Boots. Closed long-sleeved protective clothing and additionally skin care products to protect the skin from prolonged contact.
- **Eye protection** : Use splash goggles when eye contact due to splashing of dust or grout is possible. Conform to the relevant EN standard. (EN 166)
- * **Technical protective measures** : Local exhaust is recommended where dust may occur. Dry clean-up methods which do not cause airborne dispersion.

8.2. Control parameters

- Occupational Exposure Limits** : Limits for dust not elsewhere specified:
 -Inhalable dust , OEL: 10 mg/m³
 -Respirable dust, OEL: 3 mg/m³

9. Physical and chemical properties
9.1. Information on basic physical and chemical properties

- * **Physical state at 20 °C** : Granular solid.
- * **Colour** : Grey.
- Odour** : Odourless.
- * **Odour threshold** : Odourless.
- * **pH value** : Circa 11.5 (20°C, 9:1 Water. - Solid.)
- * **Melting point [°C]** : > 1250
- * **Decomposition point [°C]** : Not applicable. No organic peroxide present.
- * **Critical temperature [°C]** : Not applicable.
- * **Auto-ignition temperature [°C]** : Not applicable. (No pyrophoricity – no organo-metallic, organo-metalloid or organo-phosphine bindings or of their derivatives, and no other pyrophoric constituent in the composition.)
- * **Flammability (solid, gas)** : Solid. Non flammable. Does not cause or contribute to fire through friction.
- * **Flash point [°C]** : Not applicable. (Solid. Non flammable.)
- * **Boiling point [°C]** : (CN: Melting point >1250 °C)
Not applicable.
- * **Evaporation rate** : Not applicable. (Solid.)
- * **Vapour pressure [20°C]** : Not applicable. (CN: Melting point >1250 °C)
- * **Vapour density** : Not applicable. (CN: Melting point >1250 °C)
- * **Relative density, liquid (water=1)** : Not applicable. (Solid.)
- Bulk density** : 1.1 - 1.3 g/cm³ (20°C)
- Density 20°C (g/cm³)** : 3.1 - 3.3
- * **Solubility in water** : Slight. 0.1-1.5 g/L (20°C)
- * **Log Pow octanol / water at 20°C** : Not applicable. (Inorganic material.)
- * **Viscosity at 40°C [mm²/s]** : Not applicable. (Solid.)

9.2. Other information

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9. Physical and chemical properties (continued)

- * **Explosive properties** : Not applicable. (Not explosive or pyrotechnic. Not in itself capable of producing gas by chemical reaction at temperature and pressure and at a speed as to cause damage to the surroundings. not capable of a self-sustaining exothermic chemical reaction.)
- Explosion limits - upper [%]** : Not applicable. (Solid.)
- * **Explosion limits - lower [%]** : Not applicable. (Solid.)
- * **Oxidising properties** : Not applicable. (Product will not support combustion of other materials.)

10. Stability and reactivity**10.1. Reactivity**

- * **Reactivity** : When mixed with water, Portland cement clinker will harden into a stable mass that is not reactive in normal environments.

10.2. Chemical stability

- * **Chemical stability** : Stable under recommended storage conditions. See section 7.

10.3. Possibility of hazardous reactions

Hazardous reactions : In contact with water produce alkaline substances.

10.4. Conditions to avoid

- * **Conditions to avoid** : Moisture. (Loss of product quality.)

10.5. Incompatible materials

- * **Materials to avoid** : Acids. Ammonium salts.

10.6. Hazardous decomposition products

- * **Hazardous decomposition products** : None under normal conditions.

11. Toxicological information**11.1. Information on toxicological effects****Acute toxicity**

- * **• Inhalation** : In aqueous media the soluble fraction of the product is mainly composed by aluminum hydroxide, depending on pH, and calcium hydroxide Based on available data, the classification criteria are not met.
- * **• Dermal** : In aqueous media the soluble fraction of the product is mainly composed by aluminum hydroxide, depending on pH, and calcium hydroxide Based on available data, the classification criteria are not met.
- * **• Ingestion** : LD 50 > 2000 mg/kg (Based on test data on a similar substance. , OECD 423) (1) Based on available data, the classification criteria are not met.
- * **Sensitization** : - Dermal : Based on test data on a similar substance. , OECD 406 (4) Based on available data, the classification criteria are not met.
- Respiratory : No sensitizing potential. Based on available data, the classification

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11. Toxicological information (continued)

- criteria are not met.
- * **Mutagenicity** : No evidence of mutagenic effects. Based on available data, the classification criteria are not met.
 - * **Carcinogenicity** : Based on available data, the classification criteria are not met. No carcinogenic effects known under normal conditions of use.
 - * **Toxic for reproduction** : Based on available data, the classification criteria are not met.
 - * **STOT-single exposure** : May cause irritation to the respiratory tract, sneezing, coughing, burning sensation of throat with constricting sensation of the larynx and difficulty in breathing. Overall, the pattern of evidence clearly indicates that occupational exposure to cement dust has produced deficits in respiratory function. However, evidence available at the present time is insufficient to establish with any confidence the dose-response relationship for these effects.
 - * **STOT-repeated exposure** : The results of studies in various animal species (rats, rabbits, chickens, pigs) at percentages up to 5% of Clinker as a binder in diet for two months, showed that the Aluminous cement clinkers do not cause adverse effect on the zoological performance and the survival of animal at concentrations up to 5% Aluminous cement clinkers in their diet. The mean daily dose was calculated at approximately 130 mg/kg body weight.
 - * **Aspiration hazard** : Not applicable. (Not used as an aerosol.)
 - * **Eye irritation** : Based on test data on a similar substance. , OECD 405 (3) Based on available data, the classification criteria are not met.
 - * **Skin irritation** : Based on test data on a similar substance. , OECD 404 (2) Based on available data, the classification criteria are not met.

12. Ecological information**12.1. Toxicity**

- * **Toxicity information** : The only species present in water is aluminium hydroxide. No specific risk for the environment.

12.2. Persistence - degradability

- * **Persistence - degradability** : Not applicable. Inorganic material. After hydration, product lumps present no toxicity risks.

12.3. Bioaccumulative potential

- * **Bioaccumulative potential** : Not applicable. Inorganic material. After hydration, product lumps present no toxicity risks.

12.4. Mobility in soil

- * **Mobility in soil** : Not applicable. Inorganic material. After hydration, product lumps present no toxicity risks.

12.5. Results of PBT and vPvB assessment

- * **Results of PBT and vPvB assessment** : Not applicable. Inorganic material. After hydration, product lumps present no toxicity risks.

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12. Ecological information (continued)**12.6. Other adverse effects**

* Other : Not relevant.

13. Disposal considerations**13.1. Waste treatment methods*** **General** : Avoid release to the environment. Prevent entry to sewers and public waters.
* **Disposal method** : Not applicable. Recover and reclaim or recycle, if practical.**14. Transport information*** **General information** : Not dangerous good under transport regulations. (IMDG, IATA, ADR-RID) No special precautions are needed apart from those mentioned under Section 8
* **14.1. UN number** : Not relevant.
* **14.2. UN proper shipping name** : Not relevant.
* **14.3. Transport hazard class(es)** : Not relevant.
* **14.4. Packing group** : Not relevant.
* **14.5. Environmental hazard** : Not relevant.
* **14.6. Special precautions for user** : Not relevant.
* **14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** : Not relevant.**15. Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****Safety, health and environmental regulations/legislation specific for the substance or mixture** : Ensure all national/local regulations are observed.**Further information** : Cement clinker is exempted from registration (article 2.7(b) and annex V.10)**15.2. Chemical Safety Assessment****Chemical Safety Assessment** : It has not been carried out.**16. Other information*** **Revision** : Revision - See : *
* **Abbreviations and acronyms** : PBT: persistent, bioaccumulative and toxic.
vPvB: very persistent and very bioaccumulative
* **Training advice** : In addition to health, safety and environmental training programs for their workers, companies must ensure that workers read, understand and apply the requirements of this SDS.

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16. Other information (continued)

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| Sources of key data used | : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 |
| Further information | : These products do not require the use the reducing agent chrome (VI). VLA-ED: Occupational Exposure Limits (OEL) |

The contents and format of this SDS are in accordance with REACH Regulation (CE) N° 1907/2006 and the european agreement concerning the international carriage of dangerous goods by road (ADR).

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