

SAFETY DATA SHEET

Calcium Aluminate

Date review: 17/10/2019

Version: 2.2

SECTION 1: IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product Identifier:	Product Name: Calcium Aluminate
REACH Registration Number:	Substance included in Annex V of Regulation (EC) 1907/2006 exempt from registration requirement pursuant to Article 2 paragraph 7 of the same.
Name:	Cement, alumina, chemical compounds
CAS Number:	65997-16-2
EC Number:	266-045-5

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

Identified uses: Metallurgical industry.

1.3 Details of the supplier of the safety data sheet

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1.4 Emergency telephone number Poison Control Centers:

- CAVp "Osp. Pediatrico Bambino Gesù" - Rome - Tel. 06 68593726
- Az. Osp. Univ. Foggia - Foggia - Tel. 800183459
- Az. Osp. "A. Cardarelli" - Naples - Tel. 081 7472870
- CAV Policlinico "Umberto I" - Rome - Tel. 06 49978000
- CAV Policlinico "A. Gemelli" - Rome - Tel. 06 3054343
- Az. Osp. "Careggi" U.O. Medical Toxicology - Florence - Tel. 055 7947819
- CAV National Toxicology Information Center - Pavia - Tel. 0382 24444
- Osp. Niguarda Ca' Granda - Milan - Tel. 02 66101029
- Azienda Ospedaliera Papa Giovanni XXII - Bergamo - Tel. 800883300

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

The product is classified as hazardous according to the provisions of Regulation (EC) 1272/2008 (CLP) (and subsequent amendments and adjustments).

Classification according to Regulation (EC) No 1272/2008:

Eye irritation (Category 2)

2.2 Label elements



Hazard Pictogram: ![Hazard Pictogram](URL to hazard pictogram)

Signal word: Warning

Hazard statements: H319: Causes serious eye irritation

Precautionary statements:

- P280: Wear eye protection/face 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.
- P337 + P313: If eye irritation persists: Get medical advice/attention.

2.3 Other hazards Based on available data, the product does not contain PBT or vPvB substances in percentages greater than 0.1%.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances Product name: Calcium Aluminate

Name: Cement, alumina, chemical compounds

CAS Number: 65997-16-2

EC Number: 266-045-5

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

- **Eye contact:** Rinse immediately with water, lifting eyelids, for at least 10 - 15 minutes and consult a doctor.
- **Skin contact:** Remove contaminated clothing and wash skin with soap and water.
- **Inhalation:** Remove patient from exposure, ensure they are warm and at rest. If symptoms persist, seek medical attention.
- **Ingestion:** Do not induce vomiting. Rinse mouth with water. If symptoms persist, seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Eye and mucous membrane irritation.

4.3 Indication of any immediate medical attention and special treatment needed

- **Notes for the Doctor:** Treat symptomatically.
- **Specific treatments:** No specific treatment.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

- **Suitable extinguishing media:** Carbon dioxide, powder, water spray. For large fires, use water spray or alcohol-resistant foam. Use fire-fighting measures suitable for the environment.
- **Unsuitable extinguishing media:** Do not use water jets.

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5.2 Special hazards arising from the substance or mixture In case of fire, calcium monoxide and aluminum oxide may be released.

5.3 Advice for firefighters

- **Special precautions for firefighters:** Move containers away from the fire area if there is no risk. Use water spray to keep containers exposed to fire cool.
- **Special protective equipment for firefighters:** Normal firefighting clothing such as an open-circuit compressed air breathing apparatus (EN 137), flame retardant suit (EN 469), flame retardant gloves (EN 659), and firefighter boots (HO A29 or A30).

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear appropriate personal protective equipment (see Section 8) during spill cleanup operations. Avoid contact with eyes and skin. Ensure good ventilation. These precautions apply to both processing and emergency response personnel.

6.2 Environmental precautions

Avoid dispersing spilled material and contact with soil, waterways, drains. In case of entry into waterways, soil, or sewer system, inform the responsible authorities.

6.3 Methods and material for containment and cleaning up

Recycle if possible. Avoid dry sweeping and use vacuum or water spray systems to prevent airborne dust generation. Place waste in a labeled waste container. Use spark-resistant tools and explosion-proof equipment. Dispose of via an authorized waste disposal company.

6.4 Reference to other sections

For information on PPE see Section 8. For disposal see Section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

- **Protective measures:** Avoid contact with eyes and prolonged skin contact. Avoid generating airborne dust. Ensure adequate ventilation to ensure that occupational exposure limits are not exceeded. Any dust deposits that cannot be avoided should be regularly removed.
- **General hygiene practices:** Eating, drinking, and smoking in areas where the material is handled, stored, or processed is prohibited. Wash hands and face before eating, drinking, or smoking. Remove contaminated clothing and protective equipment before entering dining areas. See also Section 8 for further hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store according to local regulations. Store in a dry, well-ventilated place at room temperature. Keep in tightly closed original containers. Store separately from food.

7.3 Specific end uses

Apart from the uses described in Section 1.2, no other specific uses are stipulated.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

The information in this section contains generic advice and guidance.

8.1 Control parameters Observe occupational exposure limits for any type of airborne dust (e.g., total dust, respirable dust).

- **SCOEL Recommendation (SCOEL/SUM/137):**
 - Occupational exposure limit (OEL), time-weighted average for an 8-hour shift: 1 mg/m³ of respirable calcium oxide dust.
 - Short-term exposure limit (STEL), 15 minutes: 4 mg/m³ of respirable calcium oxide dust.

8.2 Exposure controls

8.2.1 Organizational measures

- **Hygiene measures:** Ensure an eyewash station is nearby. Before eating, smoking, and using the restroom, and at the end of the work period, wash hands, arms, and face thoroughly after handling chemicals. Immediately remove any contaminated clothing, do not blow or brush off contamination.

8.2.2 Individual protection equipment

- **Eye and face protection:** Safety glasses with side protection conforming to UNI EN 166 are recommended when handling the product.
- **Hand protection:** Wear appropriate gloves suitable for the work being done (EN 374). For the final choice of glove material, consider compatibility, degradation, breakthrough time, and permeation. For preparations, the resistance of gloves to chemical agents should be verified before use. For solid substances, suitable materials may include nitrile rubber (NBR), butyl rubber (BR), fluorocarbon rubber (FKM), or neoprene rubber (CR).

- **Skin protection:** Select and use appropriate personal protective equipment for the body based on the specific work being done.
- **Respiratory protection:** In case of exposure to concentrations exceeding the occupational exposure limits, use appropriate respiratory protection commensurate with the known or anticipated exposure level and conforming to relevant EN standards (filtering facepiece certified according to UNI EN 149 or dust mask certified according to UNI EN 140). For temporary use, a filtering facepiece with P1 filters is recommended.

8.2.3 Environmental protection controls

- **Exposure controls:** Emissions from ventilation systems or work processes should be checked to ensure compliance with environmental protection legislation.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: Grey – beige – white solid.

Odor: characteristic

Odor threshold: not available.

pH: not applicable.

Melting point/freezing point: > 1200 °C

Initial boiling point and boiling range: not required for substances with melting point > 300°C.

Flash point: Not applicable to inorganic substances.

Evaporation rate: Not applicable, solid.

Flammability (solids, gases): Not applicable to inorganic substances.

Upper/lower flammability or explosive limits: Not available.

Vapor pressure: not required for substances with melting point > 300°C.

Vapor density: Not applicable, inorganic solid.

Relative density: 2.2 – 3.5 g/cm³

Solubility: Soluble in acids. Reacts with water.

Partition coefficient (n-octanol/water): Not required for inorganic substances.

Auto-ignition temperature: The substance is not self-ignitable.

Decomposition temperature: Not available.

Viscosity: Not applicable, solid substance.

Explosive properties: the substance does not contain chemical groups associated with explosive properties.

Oxidizing properties: The substance does not contain groups associated with oxidizing properties.

9.2 Other information

No additional information.

SECTION 10 STABILITY AND REACTIVITY

10.1 Reactivity

Under normal use and storage conditions, no specific danger of reaction with other substances is expected.

10.2 Chemical stability

The product is stable under normal use and storage conditions.

10.3 Possibility of hazardous reactions

Under normal use and storage conditions, no hazardous reactions are expected. Reacts with water.

10.4 Conditions to avoid

Avoid moisture.

10.5 Incompatible materials

Water.

10.6 Hazardous decomposition products

No hazardous decomposition products are formed under normal storage and use conditions.

SECTION 11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LC50 (Inhalation - mist/dust) of the mixture: Conclusive but insufficient for classification

LD50 (Oral) of the mixture: Conclusive but insufficient for classification

LD50 (Dermal) of the mixture: Conclusive but insufficient for classification

Skin corrosion/irritation

Conclusive but insufficient for classification.

Serious eye damage/irritation

The product causes severe eye irritation.

Respiratory or skin sensitization

Conclusive but insufficient for classification.

Germ cell mutagenicity

Conclusive but insufficient for classification.

Carcinogenicity

Conclusive but insufficient for classification.

Reproductive toxicity

Conclusive but insufficient for classification.

Specific target organ toxicity (STOT) — single exposure

Conclusive but insufficient for classification.

Specific target organ toxicity (STOT) — repeated exposure

Conclusive but insufficient for classification.

Aspiration hazard

Conclusive but insufficient for classification.

SECTION 12 ECOLOGICAL INFORMATION

12.1 Toxicity Environmental

toxicity values are not available due to poor solubility.

12.2 Persistence and degradability

Information not available.

12.3 Bio accumulative potential

Information not available.

12.4 Mobility in soil

Information not available.

12.5 Results of PBT and VpVb

assessment Based on available data, the product does not contain PBT or VpVb substances in concentrations greater than 0.1%.

12.6 Other adverse effects

Avoid releasing the undiluted product or large quantities into groundwater, waterways, or sewers. There is a risk of contamination of drinking water if large quantities of the product reach watercourses or the subsoil.

SECTION 13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste generation should be avoided or minimized whenever possible. Significant amounts of product residues should not be disposed of through sewers but must be treated in an appropriate effluent treatment plant. Dispose of excess and non-recyclable products via an authorized waste disposal contractor. Disposal of this product, its solutions, and any by-products should comply with environmental protection and waste disposal regulations and any local authority requirements. Waste packaging should be recycled. Do not dispose of the product and its container without taking appropriate precautions. Empty containers or liners may retain product residues. Avoid dispersal and runoff of spilled material and contact with soil, waterways, drains, and sewers.

SECTION 14 TRANSPORT INFORMATION

The product is not classified as dangerous for transport and is therefore not subject to relevant modal regulations: IMDG (sea), ADR (road), RID (rail), ICAO/IATA (air).

14.1 UN number

Not applicable.

14.2 UN proper shipping name

Not applicable.

14.3 Transport hazard class(es)

Not applicable.

14.4 Packing group

Not applicable.

14.5 Environmental hazards

Not applicable.

14.6 Special precautions for user

Not applicable.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable.

SECTION 15 REGULATORY INFORMATION

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

No registration number is available for this substance as it is exempt from registration. Annex XVII - Restrictions on the manufacture, placing on the market, and use of certain dangerous substances, mixtures, and articles:

Not applicable.

Other EU regulations:

Not applicable.

European Inventory: All components are listed or exempt.

Chemical blacklist:

Not listed.

15.2 Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16 OTHER INFORMATION

This Safety Data Sheet has been prepared in accordance with Regulations 1907/2006/EC, 830/2015/EU, and 1272/2008/EC. Major revision of section 11.

Main bibliographic sources:

Regulation (EC) 1907/2006 of the European Parliament (REACH)

Regulation (EC) 1272/2008 of the European Parliament (CLP)

Regulation (EC) 790/2009 of the European Parliament (I Atp. CLP)

Regulation (EU) 830/2015 of the European Parliament

Regulation (EC) 286/2011 of the European Parliament (II Atp. CLP)

Regulation (EC) 618/2012 of the European Parliament (III ATP. CLP)

Regulation (EC) 487/2013 of the European Parliament (IV ATP. CLP)

Regulation (EC) 944/2013 of the European Parliament (V ATP. CLP)

Regulation (EU) 605/2014 of the European Parliament (VI Atp. CLP)

Regulation (EU) 2015/1221 of the European Parliament (VII ATP. CLP)

Regulation (EU) 2016/918 of the European Parliament (VIII Atp. CLP)

Regulation (EU) 2016/1179 of the European Parliament (IX Atp. CLP)

Regulation (EU) 2017/776 of the European Parliament (X Atp. CLP)

Exposure limits to chemical agents in the workplace: • Italy Legislative Decree 9 April 2008, n.81. • OEL EU Directives 2019/130/EU; 2017/2398/EU; 2017/164/EU; 2009/161/EU; 2006/15/EC; 2004/37/EC; 2000/39/EC.

Notice to the reader

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