

**ALAG®****KERNEOS****SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

- 1.1. Product identifier** : ALAG®  
REACH Registration number : 01-2119589410-38-0000
- 1.2. Relevant identified uses of the substance or mixture and uses advised against** : Aggregate for mortars and concrete
- 1.3. Details of the supplier of the safety data sheet**
- Name** : KERNEOS SA  
**Address** : 8, Rue des Graviers  
92521 Neuilly-sur Seine Cédex  
FRANCE
- Telephone number** : +33 1 46 37 90 00  
**Telefax number** : +33 1 46 37 92 00  
**E-mail** : sds@kerneos.com
- 1.4. Emergency telephone number** : ORFILA (France) : +33 1 45 42 59 59

**SECTION 2 HAZARDS IDENTIFICATION****2.1. Classification of the substance or mixture****MOST IMPORTANT HAZARDS****Adverse human health effects**

: To our knowledge, no specific risk when handled in accordance with good occupational hygiene and safety practice.

**Environmental effects**

: Presents no particular risk to the environment, provided the recommendations concerning disposal (see section 13) and any applicable national or local regulations are complied with.

**Physical and chemical hazards****- Fire or explosion**

: No specific hazard under normal conditions of use

**Classification of the product**

: According to EC criteria, this product is not classified as a "hazardous substance" ( directive 67/548/EEC and regulation (EC) 1272/2008)

**2.2. Label elements**

- **Hazard pictograms** : None
- **Hazard statements** : None
- **Precautionary statements** : None

**2.3. Other hazards**

: None, to our knowledge

**SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS****SUBSTANCE****Common chemical name**: Reaction product of fusion between 1000°C and 2000°C of aluminium oxide and calcium oxide based raw materials with at least  $\text{CaO} + \text{Al}_2\text{O}_3 + \text{Fe}_2\text{O}_3 > 85\%$ , in which aluminium oxide and calcium oxide in varying amounts are combined in various proportions into a multiphase crystalline matrix

**ALAG®****KERNEOS****SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS (continued)**

**CAS** : 66402-68-4 ( Ceramic materials and wares, chemicals )  
**EINECS** : 932-420-3  
**REACH Registration number** : 01-2119589410-38-0000

**SECTION 4 FIRST AID MEASURES****4.1. Description of first aid measures**

**Inhalation** : In case of exposure to high concentrations of dust :  
Move the affected person away from the contaminated area and into the fresh air  
Give artificial respiration if necessary

**Skin contact** : Wipe off as much as possible  
Remove all contaminated clothing and footwear  
Rinse with water.  
In case of redness or irritation, consult a doctor

**Eye contact** : Rinsing with water whilst keeping the eyelids well open  
If irritation persists, consult an eye specialist

**Ingestion** : Rinse mouth out with water  
Consult a doctor

**4.2. Most important symptoms and effects, both acute and delayed** : None, to our actual knowledge, in normal use.

**4.3. Indication of any immediate medical attention and special treatment needed** : None, to our actual knowledge, in normal use.

**SECTION 5 FIRE-FIGHTING MEASURES**

**5.1. Extinguishing media** : All extinguishing media can be used.

**5.2. Special hazards arising from the substance or mixture** : Not combustible. Does not present any particular risk in the event of a fire

**5.3. Advice for fire-fighters** : Contain the extinguishing fluids by bunding  
Do not attempt to fight the fire without suitable protective equipment :  
Suitable breathing apparatus  
Complete protective clothing

**SECTION 6 ACCIDENTAL RELEASE MEASURES**

**6.1. Personal precautions, protective equipment and emergency procedures** : For non-emergency personnel :  
Avoid contact with skin and eyes  
Do not breathe dust.  
For emergency responders :  
Do not attempt to fight the fire without suitable protective equipment  
For further information see section 8

**6.2 Environmental precautions** : Contain the spilled material by bunding  
Do not discharge into the environment

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**SECTION 6 ACCIDENTAL RELEASE MEASURES (continued)**
**6.3. Methods and material for containment and cleaning up**

- **Recovery** : Sweep up or vacuum up the product  
Avoid the dispersion of dust
- **Cleaning/decontamination** : Wash non-recoverable remainder with large amounts of water
- **Disposal** : Dispose of at a licensed waste collection point

**6.4 Reference to other sections** : For further information see section 13

**SECTION 7 HANDLING AND STORAGE**
**7.1. Precautions for safe handling**

- Technical measures** : Ensure good ventilation of the work station
- Precautions** : Avoid contact with skin and eyes  
Do not breathe dust
- Hygiene measures** : Always wash your hands after handling the product  
Do not drink, eat or smoke in the workplace

**7.2. Conditions for safe storage, including any incompatibilities**
**Storage conditions**

- **Recommended** : Store :
  - the container tightly closed
  - in a cool, dry area.
  - protected from humidity

**Packaging materials**

- **Recommended** : Original packaging
- 7.3. Specific end use(s)** : No information available

**SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**
**8.1. Control parameters**
**Occupational exposure limits**

- **France** : Dust without specific effect :
  - Total dust - VME : 10 mg/m<sup>3</sup>
  - Inhalable dust - VME : 5 mg/m<sup>3</sup>
- **USA (ACGIH)** : Respirable dust : TLV : 3 mg/m<sup>3</sup>  
Inhalable dust : TLV : 10 mg/m<sup>3</sup>
- DNEL / PNEC** : Workers :
  - DNEL (inhalation - short term) : 10 mg/m<sup>3</sup>
  - DNEL (inhalation - long term) : 269 mg/m<sup>3</sup>
  - (results obtained by read-across with aluminium hydroxide)
  - Environment :
  - PNEC aqua – freshwater : 0.143 mg/l

**8.2. Exposure controls**

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**SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION (continued)**

- Engineering measures** : Ensure good ventilation of the work station  
Extraction to remove dust at its source
- Personal protective equipment**
- **Respiratory protection** : In the event of insufficient ventilation :  
Suitable anti-dust mask
  - **Hand protection** : Impermeable protective gloves  
The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN 374  
Breakthrough time : refer to the recommendations of the gloves supplier
  - **Eye protection** : Safety goggles
  - **Skin and body protection** : Protective clothing

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

**9.1. Information on basic physical and chemical properties**

- Physical state** : Granular
- Colour** : black / dark grey / brown
- Odour** : odourless
- Odour threshold** : Not applicable
- pH** : Not applicable
- Specific temperatures**
- **Boiling** : Not applicable
  - **Melting point** : 1270 - 1440 °C
  - Decomposition temperature** : Not determined
- Flammability characteristics**
- **Flash point** : Not applicable
  - **Auto-ignition temperature** : Not applicable
- Flammability (solid, gas)** : The product is not flammable
- Oxidizing properties** : Non oxidizing material according to EC criteria
- Explosive limits in air** : Not applicable
- Vapour pressure** : Not applicable
- Vapour density (air = 1)** : Not applicable
- Relative density (water = 1)** : 3.2 (20 °C)
- Solubility**
- **in water** : The substance reacts with water (dissolution and precipitation) and releases mostly aluminium and calcium. The maximum concentration of each of these elements in solution as a result of the solubilization of the substance is estimated at 1 g/l
- Octanol/water partition coefficient** : Not applicable (inorganic substance)
- Kinematic viscosity** : Not applicable

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**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES (continued)**

<b>Evaporation rate</b>	: Not applicable
<b>Explosive properties</b>	: Not explosive
<b>9.2 Other information</b>	: The mass median aerodynamic diameter (MMAD) is above 100 µm

**SECTION 10 STABILITY AND REACTIVITY**

<b>10.1. Reactivity</b>	: In contact with water, the product reacts chemically and hardens into stable hydrates. This reaction is exothermic and can last for 24h. The total heat released is about 500 kJ/kg
<b>10.2. Chemical stability</b>	: Stable at ambient temperature and under normal conditions of use
<b>10.3. Possibility of hazardous reactions</b>	: None under normal conditions.
<b>10.4. Conditions to avoid</b>	: Water, humidity
<b>10.5. Incompatible materials</b>	: None, to our knowledge
<b>10.6. Hazardous decomposition products</b>	: None, to our knowledge

**SECTION 11 TOXICOLOGICAL INFORMATION**
**11.1. Information on toxicological effects**


* <b>Acute toxicity</b>	: Based on available data, the classification criteria are not met. LD 50 oral (Rat) : > 2000 mg/kg (OECD 423) (results based on a similar formulation) By read across with aluminum hydroxide and since the product has no systemic toxicity at the maximum dose by oral route, it is reasonably assumed that inhalation and dermal route is of no concern for acute systemic toxicity
<b>Acute symptoms :</b>	: None, to our actual knowledge, in normal use.
<b>Skin corrosion/irritation</b>	: Not irritating (OECD 404)
<b>Serious eye damage/irritation</b>	: Not irritating (OECD 405)
<b>Respiratory or skin sensitization</b>	: Not sensitizing by skin contact (OECD 406)
<b>Carcinogenicity</b>	: By read across with aluminum hydroxide, the substance is not considered carcinogenic
<b>Germ cell mutagenicity</b>	: Ames test (with and without metabolic activation) : negative (OECD 471) (results based on a similar formulation)
<b>Reproductive toxicity</b>	: By read across with aluminum hydroxide, the substance is not considered reprotoxic
<b>STOT - single exposure</b>	: Dust from this product may cause irritation to the respiratory tract.
<b>STOT - repeated exposure</b>	: The available evidence for a repeated toxicity by oral or inhalation route to the substance does not support a toxic effect
<b>Aspiration hazard</b>	: Not applicable

**ALAG®****KERNEOS****SECTION 12 ECOLOGICAL INFORMATION**

- 12.1. Toxicity** : LC 50 (Fish : Onchorhynchus mykiss) / 96h : > 100 mg/l (OECD 203)  
EC 50 (Daphnia : Daphnia magna) / 48h : 6.6 mg/l (OECD 202)  
EC 50 (algae : Pseudokirchneriella subcapitata) / 72h : > 5.6 mg/l (OECD 202)  
(results based on a similar formulation)  
By read across with soluble aluminium salts, it is reasonably assumed that the calculated NOEC for the substance is greater than 1 mg/l
- 12.2. Persistence and degradability** : After hydration (several hours or several days under humid conditions), the product is stable in soil and in water, with a negligible mobility of its components
- 12.3. Bioaccumulative potential** : Available data on aluminium show that aluminium does not bioaccumulate
- 12.4. Mobility in soil** : No information available
- 12.5. Results of PBT and vPvB assessment** : Based on available data, the classification criteria are not met.
- 12.6. Other adverse effects** : No information available

**SECTION 13 DISPOSAL CONSIDERATIONS****13.1. Waste treatment methods****WASTE FROM PRODUCT****Destruction/Disposal** : Dispose of in accordance with relevant local regulations**CONTAMINATED PACKAGING****Destruction/disposal** : Recycle following cleaning or dispose of at an authorised site**NOTE** : The user's attention is drawn to the possible existence of specific European, national or local regulations regarding disposal**SECTION 14 TRANSPORT INFORMATION**

- 14.1. UN number** : Not restricted
- 14.2. UN proper shipping name** : Not restricted
- 14.3. Transport hazard class(es)** : Not restricted
- 14.5. Environmental hazards** : Not restricted
- 14.6. Special precautions for user** : No information available
- 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** : No information available
- NOTE** : The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transport regulations for hazardous materials, in case the date of issue is older than 12 months, compared to the current one, it would be advisable to check their validity with your commercial agency

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#### SECTION 15 REGULATORY INFORMATION

- 15.1. **Safety, health and environmental regulations/legislation specific for the substance or mixture** : No information available
- 15.2. **Chemical Safety Assessment** : A chemical safety assessment has been made

#### SECTION 16 OTHER INFORMATION

- Further information** : This sheet has been written in conformity with the REACH regulation
- Restrictions on use** : This product must not be used for other applications that mentioned in §1.
- \* Update :** : This sheet was updated (refer to the date at the top of this page)  
 Texts which have been modified since the previous version are marked with an asterisk (\*)
- Safety data sheet established by** : LISAM SERVICES - TELEGIS  
 6 rue des Boucheries F-60400 NOYON  
[www.reachelp.com](http://www.reachelp.com)  
 Safety Made Easy with [www.lisam.com](http://www.lisam.com)

This sheet complements the technical sheets but does not replace them. The information given is based on our knowledge of the product, at the time of publication. It is given in good faith.

Besides, the attention of the user is drawn to the possible risk incurred by using the product for any other use than that for which it was intended.

In no way does this exempt the user from knowing and applying all the regulations controlling his activity. The user alone will take on the responsibility for taking the precautions involved by the use of the product.

The aim of all the mandatory regulations mentioned is just to help the user to fulfill his obligations regarding the use of hazardous products.

This information must not be considered exhaustive. It does not exempt the user from ensuring that other obligations than those mentioned could apply, related to the storage and use of the product, this being his sole responsibility.

**End of document**