

Material Safety Data Sheet

Reference MSDS-US-LDS-8/06

LDSF[®]

Updated 8/24/2006

1 Product and company identification

- **Product Name**

LDSF[®]

- **Supplier**

Kerneos Inc.
1316 Priority Lane
Chesapeake, VA 23324
Phone: 757-284-3200
Fax: 757-284-3300

Calcium aluminate cement does not contain free lime or crystalline silica (such as quartz, tridymite or cristobalite) in measurable amounts.

- **CAS number**

LDSF[®] **65997-16-2** 100%

2 Composition / Information on ingredients

- **Chemical Nature**

Substance obtained from preparation of a calcium aluminate clinker. The major elements appearing in the clinker are oxides based on Al, Ca, Si and Fe. The cement particles are polyphasic and as such the following mineralogical phases can be found depending on the grade of clinker.

CaO•Al ₂ O ₃	12042-68-1
CaO•2Al ₂ O ₃	12004-88-5
12CaO•7Al ₂ O ₃	12005-57-1
2CaO•Al ₂ O ₃ •SiO ₂	12068-46-1
4CaO•Al ₂ O ₃ •Fe ₂ O ₃	12068-35-8
Al ₂ O ₃ (α, β)	1344-28-1

The generic CAS number for the polyphasic aluminate cement is:

Calcium aluminate cement 65997-16-2

3 Hazards Identification

- **HMIS Rating (NPCA)**

Health	0	Flammability	0
Reactivity	0	Personal Protection	0

- **NFPA Rating**



Health	0	Flammability	0
Reactivity	0	Special	0

Material Safety Data Sheet

Reference MSDS-US-LDS-8/06

LDSF[®]

Updated 8/24/2006

- **WHMIS Classification**



Class D, division 2B toxic material

skin or eye irritant

Class E, corrosive material

forms alkaline solution with water

- **Most important hazards**

This product is a lump form and contains only a very small amount of dust. The dust, when in contact with water, may form an alkaline solution (pH 11 – 11.5). In spite of the pH level, the alkaline reserve is limited and the product has not been classified as irritant according to the criteria defined in the EEC directives (93/21/EEC)

A dust problem may occur in confined areas. It is regarded as nuisance dust without any known specific effects to health.

- **Specific hazards**

The small amount of calcium aluminates dust associated with this lump product can react chemically and harden when mixed with water. The reaction is exothermic resulting in a temperature rise.

- **Carcinogen listed in:**

Calcium aluminate cement is not a listed carcinogen with NTP, OSHA or IARC monograph.

4 First aid measures

- **Inhalation**

Remove person to fresh air. If symptoms persist, seek medical attention

- **Skin contact**

Remove contaminated clothing and wash affected area with soap and water.

- **Eye contact**

Flush eyes with plenty of clean water. If symptoms persist, seek medical attention.

- **Ingestion**

Do not induce vomiting. Wash mouth with water and give plenty of water to drink.

5 Fire-fighting measures

Calcium aluminate is not flammable and will not support a flame. It does not promote combustion with other materials.

6 Accidental release measures

- **Personal precautions**

See section 7 and 8

- **Environmental precautions**

Avoid emission of dust

- **Methods of cleaning up**

Material Safety Data Sheet

Reference MSDS-US-LDS-8/06

LDSF[®]

Updated 8/24/2006

For large amounts, preferable use dry methods while avoiding dust exposure.

Do not empty material into drains, sewers or water basins as the material hardens in contact with water.

7 Handling and storage

• Technical measures and precautions

Use common procedures for handling and storage of industrial rock products with particular attention to suppression of dust and spillage, to avoid unnecessary exposure.

Store in dry conditions, preferably above ground.

• Safe handling advise

No particular precautions.

• Incompatible products

Contact with water or water vapor during storage could hydrate a portion of the product.

• Packaging materials

No special restrictions with respect to safety.

8 Exposure control / personal protection

• Engineering measures

Mechanical ventilation is recommended wherever feasible for evacuation of dust

during handling operations (discharging, mixing, conveying, packing, etc.).

• Control parameters

The following occupational exposure limits defined for non specified nuisance dust are applicable.

	OSHA PEL	ACGIH PEL
Total dust	15 mg/m ³	10 mg/m ³
Respirable dust	5 mg/m ³	5 mg/m ³

• Personal protective equipment

ANSI approved glasses or goggles should be worn whenever there is a risk of dust or wet mixture entering the eyes.

Protective clothing is recommended, including waterproof gloves and boots.

NIOSH approved respiratory protection should be worn when the conditions are such that the personal exposure is estimated to approach or exceed the stated limits.

9 Physical and chemical properties

Physical State:	Dry rocks
Color:	dark brown
Odor:	none
Specific gravity:	2.9 – 3.3
Vapor density:	n/a
Vapor pressure:	n/a
Evaporation rate:	n/a

Material Safety Data Sheet

Reference MSDS-US-LDS-8/06

LDSF[®]

Updated 8/24/2006

Boiling point: n/a
Freezing point: n/a
pH: 11 – 11.5 when wet
Water solubility: negligible

The product is stable in soil and in water, with a negligible mobility of its constituents.

10 Stability and reactivity

- **Stability**
In the environment the product is chemically stable.
- **Hazardous decomposition products**
None.

11 Toxicological information

- **Acute toxicity**
None.
- **Local effects**
May cause local irritation to eye, throat or skin, but is not classified as irritant according to EEC legislation
- **Sensitization and chronic toxicity**
Does not contain measurable amounts of soluble Chromium (VI)

12 Ecological information

- **Possible environmental effects**

13 Disposal considerations

Bags of unused material or empty contaminated packaging, as well as hardened residue may be disposed by landfill, if in accordance with local or national disposal regulations.

The conditions or methods for handling, stocking, using or eliminating this product are beyond the control of Kerneos. Kerneos shall therefore not be held liable in case of loss, damage or any expense incurred related to the handling, the stocking, the use or the elimination of this product howsoever.

14 Transport information

This product is not classified as a hazardous material under U.S. DOT or Canadian TDG regulations.

15 Regulatory information

- **CERCLA/Superfund**
This product is not listed as a CERCLA hazardous substance.
- **Inventory listings**
This substance is listed on:
 - U.S. TSCA inventory Section 8 (b)

Material Safety Data Sheet

Reference MSDS-US-LDS-8/06

LDSF[®]

Updated 8/24/2006

- Canadian Inventory, the DSL

16 Other information

This MSDS follows:

- OSHA CFR 1910.1200 on hazard communication
- It has been prepared by the technical department of Kerneos Inc., Chesapeake, VA.
- This version applies to Kerneos products distributed in North America. For users outside this area please consult your local office for a current MSDS.
- An electronic version of this MSDS is available at: www.Kerneosinc.com under the products section
- This document applies to this product only. When this product is mixed with other materials, the information contained in this document may not be applicable.

Kerneos Inc., believes the information contained herein is accurate: however, Kerneos makes no guarantees with respect to such accuracy and assumes no liability in connection with the use of the information contained herein which is not intended to be and should not be construed as legal advice or as insuring compliance with any federal, state or local laws or regulations. Any party using this product should review all such laws, rules or regulations prior to use, including but not limited to US and Canada Federal, Provincial and State regulations.