SAFETY DATA SHEET

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

1.1. Product identifier

Product name : CIMENT FONDU®

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

Hydraulic binder for concretes and dry-mix mortars manufacturing

1.3. Details of the supplier of the safety data sheet

Registered company name : KERNEOS INC.
Address : 1316 Priority Lane.VA 23324.Chesapeake.USA.
Telephone : +1 757 284 3200. Fax : +1 757 284 3300.
sds@kerneos.com
www.kerneosinc.com

1.4. Emergency telephone number : +1 800 424 9300.

Association/Organisation : Chemtrec for USA and Canada.

SECTION 2 : HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

HCS compliant.

This mixture does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.
This mixture does not present a health hazard with the exception of possible occupational exposure thresholds (see paragraphs 3 and 8).
This mixture does not present an environmental hazard. No known or foreseeable environmental damage under standard conditions of use.

2.2. Label elements

HCS compliant.

No labelling requirements for this substance.

2.3. Other hazards

No data available.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

No substance satisfies the criteria specified in annexe D, table D.1 of the HCS.

Composition :

Identification	HCS	Nota	%
CAS: 65997-16-2 EC: 266-045-5 REACH: Exempt CEMENT, ALUMINA, CHEMICALS			100%

Other data :

Does not contain any detectable quantities of free lime or free crystalline silica (such as quartz, tridymite or cristobalite)

SECTION 4 : FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.
NEVER induce swallowing by an unconscious person.

4.1. Description of first aid measures

In the event of exposure by inhalation :

In case of exposure to high concentrations of dust : move the affected person away from the contaminated area and into the fresh air

In the event of splashes or contact with eyes :

Wash thoroughly with fresh, clean water for 15 minutes holding the eyelids open.
If there is any redness, pain or visual impairment, consult an ophthalmologist.

In the event of splashes or contact with skin :

Watch out for any remaining product between skin and clothing, watches, shoes, etc.
Wash with soap

In the event of swallowing :

Seek medical attention, showing the label.

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

None, to our knowledge

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

Treat symptomatically

SECTION 5 : FIREFIGHTING MEASURES

Non-flammable.

5.1. Extinguishing media

Non flammable

5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.
Do not breathe in smoke.

5.3. Advice for firefighters

No data available.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed under headings 7 and 8.

For first aid worker

First aid workers will be equipped with suitable personal protective equipment (See section 8).

6.2. Environmental precautions

Prevent any material from entering drains or waterways.

6.3. Methods and material for containment and cleaning up

Retrieve the product by mechanical means (sweeping/vacuuming) : do not generate dust.

6.4. Reference to other sections

Sections 7, 8 & 13

SECTION 7 : HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the substance is handled.

7.1. Precautions for safe handling

Always wash hands after handling.

Fire prevention :

Prevent access by unauthorised personnel.

Recommended equipment and procedures :

For personal protection, see section 8.
Observe precautions stated on label and also industrial safety regulations.

Prohibited equipment and procedures :

No smoking, eating or drinking in areas where the substance is used.

7.2. Conditions for safe storage, including any incompatibilities

Keep the container tightly closed in a cool, well ventilated place
Keep the container away from dampness

Packaging

Always keep in packaging made of an identical material to the original.

7.3. Specific end use(s)

No data available.

SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits :

Particles not otherwise specified/classified

USA / OSHA PEL (Occupational Safety and Health Administration, Permissible Exposure Limits) : Respirable particles TWA=5mg/m3 Total particles TWA=15mg/m3

ACGIH TLV (American Conference of Governmental Industrial Hygienists, Threshold Limit Values, 2010) : Respirable particles TWA =3 mg/m3 Inhalable particles TWA=10mg/m3

8.2. Exposure controls

Personal protection measures, such as personal protective equipment

Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE) :

Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

- Eye / face protection

Avoid contact with eyes.

Before handling powders or dust emission, wear mask goggles in accordance with standard EN166.

- Hand protection

Wear suitable protective gloves in the event of prolonged or repeated skin contact.

Recommended properties :

- Impervious gloves in accordance with standard EN374

- Body protection

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

- Respiratory protection

Avoid breathing dust.

Type of FFP mask :

Wear a disposable half-mask dust filter in accordance with standard EN149.

Category :

- FFP3

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

General information :

Physical state :	Powder or dust.
Apparent bulk density (Loose packed) :	1100 - 1300 kg/m3
Color:	Grey / brown
Odour:	Odourless

Important health, safety and environmental information

pH (aqueous solution) :	11 - 11.5 (20°C - 10%)
pH :	Not stated.
Boiling point/boiling range :	Not relevant.
Flash point interval :	Not relevant.
Vapour pressure (50°C) :	Not relevant.
Density :	3.2 - 3.3
Water solubility :	Partially soluble. <2%
Melting point/melting range :	1300 °C.
Self-ignition temperature :	Not specified.
Decomposition point/decomposition range :	Not specified.

9.2. Other information

No data available.

SECTION 10 : STABILITY AND REACTIVITY

10.1. Reactivity

In the presence of water, calcium aluminates react chemically and harden to form stable calcium aluminate hydrates. This reaction is exo-thermal and may last up to 24 hours. The total heat released is < 500 kJ/kg.

10.2. Chemical stability

This substance is stable under the recommended handling and storage conditions in section 7.

10.3. Possibility of hazardous reactions

None under normal conditions.

10.4. Conditions to avoid

Avoid :

- formation of dusts

- humidity

10.5. Incompatible materials

None, to our knowledge

10.6. Hazardous decomposition products

None, to our knowledge

SECTION 11 : TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

No data available.

11.1.1. Substances

Skin corrosion/skin irritation :

CEMENT, ALUMINA, CHEMICALS (CAS: 65997-16-2)

Corrosivity : No observed effect.
Species : Rabbit
OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious damage to eyes/eye irritation :

CEMENT, ALUMINA, CHEMICALS (CAS: 65997-16-2)

Corneal haze : Average score < 1
Species : Rabbit
Duration of exposure : 72 h
OECD Guideline 405 (Acute Eye Irritation / Corrosion)

No observed effect.

Iritis : Average score < 1
Species : Rabbit
Duration of exposure : 72 h
OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Conjunctival redness : Average score < 2
Species : Rabbit
Duration of exposure : 72 h
OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Conjunctival oedema : Average score < 2
Species : Rabbit
Duration of exposure : 72 h
OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Specific target organ systemic toxicity - single exposure :

Dust from this product may cause irritation to the respiratory tract.

SECTION 12 : ECOLOGICAL INFORMATION

The product must not be allowed to run into drains or waterways.

12.1. Toxicity

12.1.1. Substances

CEMENT, ALUMINA, CHEMICALS (CAS: 65997-16-2)

Fish toxicity : LC50 > 100 mg/l
Species : Oncorhynchus mykiss
Duration of exposure : 96 h
OECD Guideline 203 (Fish, Acute Toxicity Test)

NOEC > 100 mg/l
Species : Oncorhynchus mykiss
Duration of exposure : 96 h
OECD Guideline 203 (Fish, Acute Toxicity Test)

Crustacean toxicity : EC50 = 6.6 mg/l
Species : Daphnia magna
Duration of exposure : 48 h
OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

NOEC = 1.8 mg/l

	Species : Daphnia magna Duration of exposure : 48 h OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Algae toxicity :	ECr50 > 5.6 mg/l Species : Pseudokirchnerella subcapitata Duration of exposure : 72 h OECD Guideline 201 (Alga, Growth Inhibition Test)
	NOEC = 3.2 mg/l Species : Pseudokirchnerella subcapitata Duration of exposure : 72 h OECD Guideline 201 (Alga, Growth Inhibition Test)

12.2. Persistence and degradability

After hydratation (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

Not relevant because cement is inorganic.

12.4. Mobility in soil

Not relevant because cement is inorganic.

12.5. Results of PBT and vPvB assessment

Not relevant because cement is inorganic.

12.6. Other adverse effects

No data available.

SECTION 13 : DISPOSAL CONSIDERATIONS

The appropriate waste management of the substance and/or its container must be determined in accordance with local regulations.

13.1. Waste treatment methods

Do not pour into drains or waterways.

Waste :

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Soiled packaging :

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

SECTION 14 : TRANSPORT INFORMATION

Exempt from transport classification and labelling.

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2015 - IMDG 2014 - ICAO/IATA 2015).

SECTION 15 : REGULATORY INFORMATION

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

The following regulations have been used:

- OSHA Hazard Communication Standard 29 CFR 1910.1200

- Container information:

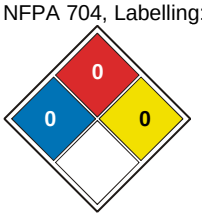
No data available.

- Particular provisions :

Canada : Domestic Susbtance list (DLS) : calcium aluminate cement is listed in DSL inventory

- Standardised American system for the identification of hazards presented by the product in view of emergency procedures (NFPA 704) :

NFPA 704, Labelling: Health=0 Inflammability=0 Instability/Reactivity=0 Specific Risk=none



- Clean Water Act : Toxic Pollutants (CWA 307A)

Unlisted

- Clean Water Act : Hazardous Substances (CWA 311)

Unlisted

- Clean Water Act : Hazardous Substances (CWA 304b)

Unlisted

- Clean Water Act : Priority Pollutants (CWA Priority)

Unlisted

- Clean Air Act : Hazardous Air Pollutants (CAA 112(b) HAP (188))

Unlisted

- Clean Air Act : Organic Hazardous Air Pollutants National Emission Standards (CAA 112(b) HON (387))

Unlisted

- Clean Air Act : Protection of Stratospheric Ozone (CAA 602)

Unlisted

- SARA 110

Unlisted

- SARA 302/304

Unlisted

- SARA 313

Unlisted

- California proposition 65 : Chemicals known to the state to cause cancer or reproductive toxicity

Unlisted

- Massachusetts : Right to Know

Unlisted

- New Jersey : Right to Know

Unlisted

- Pennsylvania : Hazardous Substance

Unlisted

- Rhode Island : Hazardous substance list

Unlisted

- TSCA (Toxic Substances Control Act) - USA

CAS	Name
65997-16-2	CEMENT, ALUMINA, CHEMICALS

15.2. Chemical safety assessment

No data available.

SECTION 16 : OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the substance and not as a guarantee of the properties thereof.

Abbreviations :

ADR : European agreement concerning the international carriage of dangerous goods by Road.

IMDG : International Maritime Dangerous Goods.

IATA : International Air Transport Association.

ICAO : International Civil Aviation Organisation

RID : Regulations concerning the International carriage of Dangerous goods by rail.

PBT: Persistent, bioaccumulable and toxic.

vPvB : Very persistent, very bioaccumulable.

HCS : Hazard Communication standard (OSHA).