



## SAFETY DATA SHEET

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

#### 1.1. Product identifier

Product name : TERNAL® EP

#### 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 mixture.

#### 2.3. Other hazards

None to your knowledge

### SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.2. Mixtures

##### Composition :

Cement Alumina Chemicals CAS : 65997-16-2

Classification HCS : not classified

Content : > 99.5%

##### Other data :

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

The cement does not contain quantities of soluble hexavalent chromium >2 ppm, measured according to EN 196-10

### 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 mixture 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 mixture 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

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

USA / OSHA PEL (Occupational Safety and Health Administration, Permissible Exposure Limits) : Respirable particles TWA=5mg/m<sup>3</sup> Total particles TWA=15mg/m<sup>3</sup>

#### 8.2. Exposure controls

##### Personal protection measures, such as personal protective equipment

## TERNAL® EP

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) :	1200 - 1400 kg/m <sup>3</sup>
Color:	Grey / brown
Odour:	Odourless

**Important health, safety and environmental information**

pH (aqueous solution) :	11 - 12 (10%)
pH :	Not stated.
Boiling point/boiling range :	Not relevant.
Flash point interval :	Not relevant.
Vapour pressure (50°C) :	Not relevant.
Density :	2.85 - 3.05 g/cm <sup>3</sup>
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 mixture 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 - Rabbit - OECD 404

##### Serious damage to eyes/eye irritation :

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

- Corneal haze & Iritis :

Average score < 1 - Rabbit - 72h - OECD 405

- Conjunctival redness & Conjunctival oedema :

Average score < 2 - Rabbit - 72h - OECD 405

##### Respiratory or skin sensitisation :

Does not contain quantities of hexavalent chromium > 2 ppm, measured according to EN 196-10

##### Specific target organ systemic toxicity - single exposure :

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

#### 11.1.2. Mixture

##### Skin corrosion/skin irritation :

Not irritating

##### Serious damage to eyes/eye irritation :

Dust may cause slight irritation to the ocular mucous membranes due to the presence of a foreign body.

Not irritating

##### Respiratory or skin sensitisation :

In accordance with the requirements REACH Annex XVII, art. 47, the cement does not contain quantities of soluble hexavalent chromium > 2 ppm, measured according to EN 196-10

##### 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 :

CL50 > 100 mg/l - NOEC > 100 mg/l

Oncorhynchus mykiss - 96 h - OECD 203

- Crustacean toxicity :

CE50 = 6.6 mg/l - NOEC = 1.8 mg/l

Daphnia magna - 48 h - OECD 202

- Algae toxicity :

CEr50 > 5.6 mg/l - NOEC = 3.2 mg/l

Pseudokirchnerella subcapitata - 72 h - OECD 201

#### 12.1.2. Mixtures

No aquatic toxicity data available for the mixture.

### 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

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 concerned, the mixture is inorganic

**12.6. Other adverse effects**

No data available.

**SECTION 13 : DISPOSAL CONSIDERATIONS**

The appropriate waste management of the mixture 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.

**14.1. UN number**

-

**14.2. UN proper shipping name**

-

**14.3. Transport hazard class(es)**

-

**14.4. Packing group**

-

**14.5. Environmental hazards**

-

**14.6. Special precautions for user**

-

**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.

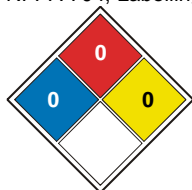
**- Particular provisions :**

Canada : Domestic or Non-Domestic Substance List (DSL or NDSL) : all substances are registered in the DSL or NDSL inventory

Canada WHMIS classification : none

**- 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**  
Unlisted.

#### 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.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.

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 mixture 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).