

HOTTEC CORP.

FORMCERAM C442

Material Safety Data Sheet

---

## 1. CHEMICAL PRODUCT AND COMPANY DESCRIPTION

---

Hottec Corp.  
One Terminal Way  
Norwich, CT 06360

**Emergency Phone Numbers:**

For emergencies involving a spill, leak, fire, exposure, or accident  
Contact: Hottec Corp. 860-887-5111, evenings 860-822-1701

**For Product Information:**

860-887-5111

**Chemical Name or Synonym:**

Cementous Aluminates

**HMIS:**

Health 0  
Flammability 0  
Reactivity 1

---

## 2. INGREDIENT INFORMATION

---

<u>Component</u> <u>Typical Weight Percent</u>	<u>CAS Number</u>	<u>Exposure Limits</u>	
Calcium Aluminate 97.0	12042-68-1	10, 5 mg/m <sup>3</sup> (respirable)	
*Silicon Dioxide	Not Available	{80% / (%SiO <sub>2</sub> )}	0.3

\*Expressed as oxide equivalent

---

### 3. HAZARDS IDENTIFICATION

---

#### **Emergency Overview:**

No unusual fire or spill hazard. Low Health risk by inhalation. May irritate eyes. Avoid repeated or prolonged skin contact. Off-white powder. Non-flammable, not an explosion hazard.

#### **Potential Health Effects:**

Eyes – May cause irritation, especially when wet.

Skin – May irritate skin.

Inhalation – May cause upper respiratory irritation.

This product contains silicates at less than 1% by weight. Silicates include metal silicates, amorphous and crystalline silica. No analytical method exists to detect and differentiate between amorphous and crystalline silica and other silicates at less than 1% by weight. Based on the chemistry of bauxite-derived products, crystalline silica is not expected to be present in this product.

Alumina is a low health risk by inhalation and should be treated as a nuisance dust as specified by the American medical conditions aggravated by exposure: Asthma, chronic lung disease, and skin rashes.

---

### 4. FIRST AID MEASURES

---

#### **Eyes:**

Flush eyes with plenty of water for at least 20 minutes. If irritation persists, consult a physician.

#### **Skin:**

Wash with soap and warm water for at least 20 minutes. If irritation develops, consult a physician.

**Inhalation:** Remove victim to fresh air. If not breathing, give artificial respiration. Get immediate medical attention.

#### **Ingestion:**

Do not induce vomiting. Never give anything by mouth to a convulsing or unconscious person. If swallowed, dilute by drinking large amounts of water. Consult a physician.

---

## 5. FIRE FIGHTING MEASURES

---

**Flammable Properties:**

Non-flammable

Flash Point – None

Flammable Limits – None

**Auto-Ignition Temperature:**

Not applicable

**Hazardous Decomposition Products:**

None

**Extinguishing Media:**

Use extinguishing agent applicable to surrounding fire.

**Fire-fighting instructions:**

Fire-fighters should wear NIOSH approved, positive pressure, self-contained breathing apparatus and full protective clothing when appropriate.

---

## 6. ACCIDENTAL RELEASE MEASURES

---

**Small/large spill:**

Wear protective clothing; avoid dusting. Do not allow product to reach sewage system or water bodies. Clean up using dry procedures. Collect mechanically.

---

## 7. HANDLING AND STORAGE

---

**Handling:**

Ensure good ventilation/exhaust at the workplace. Prevent formation of dust. Provide suction extractors if dust is formed.

**Storage:**

Keep material dry. Keep receptacle tightly sealed.

---

## 8. EXPOSURE CONTROLS

---

**Engineering Controls:**

Use with adequate ventilation to meet exposure limits listed in section 2

**Respiratory Protection:**

NIOS approved dust respirator.

**Skin Protection:**

Gloves, long-sleeved shirt.

**Eye Protection:**

Chemical goggles recommended.

---

## 9. PHYSICAL AND CHEMICAL PROPERTIES

---

**Appearance:**

Off-white powder (90% thru 200 mesh; 85% thru 325 mesh)

**Boiling Point:**

Not applicable.

**Melting Point:**

1760 to 1816 degrees C

**Vapor Pressure:**

Not applicable

**Vapor Density:**

Not applicable

**Solubility in Water:**

Forms slurry

**Specific Gravity:**

Not determined

**Density:**

Loose-56 pcf; packed-92 pcf

**pH (10% slurry):**

11.5

**Odor:**

None

**Odor threshold:**

Not applicable.

**Coefficient of Water/oil distribution:**

Not applicable.

---

## 10. STABILITY AND REACTIVITY

---

**Chemical Stability (conditions to avoid):**

Keep away from water. A rise in temperature may result from contact with water.

**Incompatibility:**

None

**Hazardous Decomposition Products:**

None

**Hazardous Polymerization:**

None

This material reacts with water to form an alkaline slurry as a binder for refractories. Explosive steam spalling may result from improper curing, drying, and firing procedures of refractories (see references, section 16). For safest use and optimum performance, proper practices must be followed.

---

## 11. TOXICOLOGICAL INFORMATION

---

No LD50 or LC50 found for oral, dermal or inhalation routes of administration.

**Silicon:**

LD50 (oral-rat) 3, 160 mg/kg.



Europe Waste Disposal-Key number 513 05

**International Regulations**

Canadian SHMIS-Listed on DSL.

EINECS-All components of this product are on the European inventory of existing commercial chemical substances.

Australia-All components of this product are listed on the AICS inventory.

---

16. OTHER INFORMATION

---

Used as a cement in refractories

**References:**

“Explosive spalling of refractory castables bonded with calcium aluminate cement”, ALCOA, 1979. Pub. F35-11467.

American industrial hygiene association, hygienic guide series, June 1978 edition.

U.S. department of health and human services, NIOSH: Registry of toxic effects of chemical substances, 1985-86 edition.

Sax, N. Irving: Dangerous properties of industrial materials, Van Nostrand Reinhold Co., 1984

American conference of governmental industrial hygienists, Inc. (ACGI), Documentation of the threshold limit values and biological exposure indices, sixth edition, 1992

Information herein is given in good faith as authoritative and valid; however, no warranty, express or implied can be made.