

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture  
 Product name : FurnaCubed FS  
 CAS No : Mixture  
 Product code : 0880  
 Other means of identification : Alumina-Silicate Cement Bonded Castable

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

Use of the substance/mixture : Refractory

#### 1.3. Details of the supplier of the safety data sheet

Resco Products, Inc.  
 One Robinson Plaza, Suite 300  
 6600 Steubenville Pike  
 Pittsburgh, PA 15205 - United States  
 412-494-4491  
[www.rescoproducts.com](http://www.rescoproducts.com)

#### 1.4. Emergency telephone number

Emergency number : EMERGENCY ONLY (CHEMTREC) USA & Canada 1-800-424-9300  
 Outside USA & Canada +1 703-741-5970

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Skin Irrit. 2 H315  
 Eye Irrit. 2B H320  
 Carc. 1A H350

Full text of H-phrases: see section 16

#### 2.2. Label elements

##### GHS-US labelling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Hazard statements (GHS-US) :

Precautionary statements (GHS-US) :

Danger  
 H315 - Causes skin irritation  
 H320 - Causes eye irritation  
 H350 - May cause cancer (Inhalation)  
 P280 - Wear eye protection, Dust respirator, protective gloves  
 P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P332+P313 - If skin irritation occurs: Get medical advice/attention  
 P337+P313 - If eye irritation persists: Get medical advice/attention  
 P260 - Do not breathe dust

#### 2.3. Other hazards

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable

#### 3.2. Mixture

Name	Product identifier	%	GHS-US classification
aluminium oxide, non-fibrous	(CAS No) 1344-28-1	5 - 10	Not classified
Calcium Aluminate Cement	(CAS No) 65997-16-2	5 - 10	Skin Irrit. 2, H315 Eye Irrit. 2B, H320
cristobalite	(CAS No) 14464-46-1	1 - 5	Carc. 1A, H350
aluminium fluoride	(CAS No) 7784-18-1	1 - 5	Acute Tox. 4 (Oral), H302

Full text of H-phrases: see section 16

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

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First-aid measures after inhalation	: Allow victim to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact	: Wash with plenty of soap and water. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

Symptoms/injuries after inhalation	: May cause cancer by inhalation. Danger of serious damage to health by prolonged exposure through inhalation.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes eye irritation.

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	: No unsuitable extinguishing media known.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: Not flammable.
Reactivity	: Hydraulic setting.

### 5.3. Advice for firefighters

Firefighting instructions	: Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures	: Do not breathe dust.
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#### 6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: On land, sweep or shovel into suitable containers. Minimize generation of dust.
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### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling	: Do not handle until all safety precautions have been read and understood. Avoid raising dust. Avoid contact with skin and eyes. Do not breathe dust.
Hygiene measures	: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Store this product in a dry location where it can be protected from the elements.
Incompatible products	: Strong bases. Strong acids.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

FurnaCubed FS (Mixture)		
ACGIH	Not applicable	
OSHA	Not applicable	
Calcium Aluminate Cement (65997-16-2)		
ACGIH	Not applicable	
OSHA	Not applicable	
cristobalite (14464-46-1)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.025 mg/m <sup>3</sup> respirable dust
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup> respirable dust
aluminium oxide, non-fibrous (1344-28-1)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
OSHA	Not applicable	

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aluminium fluoride (7784-18-1)	
ACGIH	Not applicable
OSHA	Not applicable

### 8.2. Exposure controls

Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: Wear protective gloves.
Eye protection	: Chemical goggles or safety glasses.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: Wear appropriate mask.
Other information	: Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

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

Physical state	: Solid
Appearance	: Granular mixture.
Colour	: Light grey
Odour	: Earthy Odor
Odour threshold	: Not applicable
pH	: No data available
Melting point	: > 2000 °F
Freezing point	: Not applicable
Boiling point	: Not applicable
Critical temperature	: Not applicable
Critical pressure	: Not applicable
Flash point	: Not applicable
Relative evaporation rate (butylacetate=1)	: Not applicable
Relative evaporation rate (ether=1)	: Not applicable
Flammability (solid, gas)	: None
Explosive limits	: Not applicable
Explosive properties	: No data available
Oxidising properties	: No data available
Vapour pressure	: Not Applicable
Vapour pressure at 50 °C	: Not Applicable
Relative density	: 2 - 3
Relative vapour density at 20 °C	: No data available
Solubility	: Water: Slight
Log Pow	: No data available
Log Kow	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity	: Not Applicable
Viscosity, kinematic	: Not Applicable
Viscosity, dynamic	: Not Applicable

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Hydraulic setting.

### 10.2. Chemical stability

Not established.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Avoid dust formation.

### 10.5. Incompatible materials

Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

No additional information available

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### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

aluminium oxide, non-fibrous (1344-28-1)	
LD50 oral rat	> 10000 mg/kg (Rat; Experimental value)

aluminium fluoride (7784-18-1)	
LD50 oral rat	1800 mg/kg (Rat)
ATE US (oral)	1800.000 mg/kg bodyweight

Skin corrosion/irritation : Causes skin irritation.  
Serious eye damage/irritation : Causes eye irritation.  
Respiratory or skin sensitisation : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : May cause cancer (Inhalation).

cristobalite (14464-46-1)	
IARC group	1 - Carcinogenic to humans

Reproductive toxicity : Not classified  
Specific target organ toxicity (single exposure) : Not classified  
Specific target organ toxicity (repeated exposure) : Not classified  
Aspiration hazard : Not classified

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/injuries after inhalation : May cause cancer by inhalation. Danger of serious damage to health by prolonged exposure through inhalation.

Symptoms/injuries after skin contact : Causes skin irritation.

Symptoms/injuries after eye contact : Causes eye irritation.

### SECTION 12: Ecological information

#### 12.1. Toxicity

aluminium oxide, non-fibrous (1344-28-1)	
Threshold limit algae 1	> 100 mg/l (72 h; Selenastrum capricornutum; GLP)

aluminium fluoride (7784-18-1)	
LC50 fish 1	60 ppm (Pisces; Lethal)

#### 12.2. Persistence and degradability

FurnaCubed FS (Mixture)	
Persistence and degradability	Not established.

cristobalite (14464-46-1)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

aluminium oxide, non-fibrous (1344-28-1)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

aluminium fluoride (7784-18-1)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

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### 12.3. Bioaccumulative potential

FurnaCubed FS (Mixture)	
Bioaccumulative potential	Not established.
cristobalite (14464-46-1)	
Log Pow	Not applicable
Bioaccumulative potential	No bioaccumulation data available.
aluminium oxide, non-fibrous (1344-28-1)	
Bioaccumulative potential	No bioaccumulation data available.
aluminium fluoride (7784-18-1)	
Bioaccumulative potential	No bioaccumulation data available.

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.  
None known

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.  
Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT  
Not regulated for transport

### Additional information

Other information : No supplementary information available.

### ADR

No additional information available

### Transport by sea

No additional information available

### Air transport

No additional information available

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Calcium Aluminate Cement (65997-16-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### cristobalite (14464-46-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

#### CANADA

#### FurnaCubed FS (Mixture)

WHMIS Classification : D2A

### EU-Regulations

No additional information available

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

No additional information available

#### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

### National regulations

No additional information available

### 15.3. US State regulations

#### FurnaCubed FS(Mixture)

U.S. - California - Proposition 65 - Other information : This product contains crystalline silica, a chemical known to the state of California to cause cancer.

#### cristobalite (14464-46-1)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	No	No	No	

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**crystalite (14464-46-1)**

U.S. - New Jersey - Right to Know Hazardous Substance List

### SECTION 16: Other information

Other information : None.

Full text of H-phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Carc. 1A	Carcinogenicity, Category 1A
Eye Irrit. 2B	Serious eye damage/eye irritation, Category 2B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H302	Harmful if swallowed
H315	Causes skin irritation
H320	Causes eye irritation
H350	May cause cancer

SDS US (GHS HazCom 2012)

*This information and recommendations set forth herein are taken from sources believed to be accurate as of the date herein, however, Resco Products, Inc. makes no warranty with respect to the accuracy of the information or the suitability of the recommendations, and assumes no liability to any user thereof.*