

# Phoenix Cement Company

## SAFETY DATA SHEET

Version 1.0  
Revision Date: 03/14/2017

### 1. IDENTIFICATION

#### Product Identifiers

Product Name: Class "C" Fly Ash  
 Product Number: Varies. Represents Multi-Unit Mixture  
 Trade Name: Fly Ash  
 General Use: Construction  
 Chemical Family: Calcined Natural Pozzolan

#### Relevant Identified Uses

Identified Uses: Other Industrial/Commercial Applications

#### Supplier Details

Company: Phoenix Cement Company  
 8800 E. Chaparral Rd. Suite 155  
 Scottsdale, AZ 85250-2606  
 USA  
 Telephone: Customer Service (480)850-5757, 8AM-5PM US Mountain Time

#### Emergency Telephone Number

Emergency Phone #: 1-800-424-9300 (CHEMTREC) 24-Hour

### 2. HAZARDS IDENTIFICATION

#### Classification of the Substance or Mixture

Not Classified

#### GHS Label Elements

Signal word: No signal word  
 Hazard statement(s): No known health effects or hazards

#### Precautionary Statement(s)

Prevention: Not applicable  
 Response: Not applicable  
 Storage: Not applicable  
 Disposal: Not applicable

Hazards not otherwise classified (HNOC) – None

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Substances

Synonyms: Pulverized Fuel Ash  
 Class: Coal Combustion Residuals

#### Ingredients

Chemical Name, Empirical Formula	CAS Number	EINECS Number	Percentage (%)
Merwinite [Ca <sub>3</sub> Mg(SiO <sub>4</sub> ) <sub>2</sub> ]	13813-64-4	237-477-1	6% - 12% wt
Quartz [SiO <sub>2</sub> Non-Respirable]	14808-60-7	238-878-4	5% - 11% wt
Ettringite [Ca <sub>6</sub> Al <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub> (OH) <sub>12</sub> ·26H <sub>2</sub> O]	12252-12-9	924-531-0	1% - 7% wt

Periclase [MgO]	1309-48-4	215-171-9	0% - 5% wt
Anhydrite [CaSO <sub>4</sub> ]	7778-18-9	231-900-3	0% - 5% wt
Gypsum [CaSO <sub>4</sub> ·2H <sub>2</sub> O]	10101-41-4	600-148-1	0% - 5% wt
Gehlenite [Ca <sub>2</sub> Al(AISiO <sub>7</sub> )]	1327-39-5	215-476-7	0% - 3% wt
Amorphous (Non-Crystalline Ash Residue)	68131-74-8	931 322 8	60% - 80% wt
Varies (Naturally Occurring)	-----	-----	<1% wt

### Hazardous Components

These products may contain Respirable Crystalline Silica (CAS #'s 14808-60-7 and 14464-46-1) at trace concentration levels below HazCom 2012 and GHS Revision 3 hazard classification limits. Per XRC analysis, which combines the analytical capabilities of X-Ray Diffraction, Computer Controlled Scanning Electron Microscopy/Energy Dispersive Spectroscopy and Raman Spectroscopy to conduct particle-by-particle inter-instrumental relocation and physicochemical/mineralogical analysis - naturally occurring trace level substances in these products, including Respirable Crystalline Silica are inextricably bound, environmentally unavailable and at de minimis concentrations. Thus, in the current and anticipated future physical state of these products, they are believed to be incapable of causing harm under normal conditions of use or in an extreme upset environment.

### Additional Information

Per Rietveld Enhanced XRD quantification of crystalline phase minerals and ICP-AES analysis of leachate using Indiana-Neutral modified 1311 SW-846 TCLP, naturally occurring trace level components in these products are insignificant and/or environmentally unavailable. Therefore, they have been excluded from reporting and classification as either a health or environmental hazard.

## 4. FIRST AID MEASURES

### Description of Necessary First Aid Measures

**Eye Contact:** In case of eye contact, flush eyes with water. If necessary, seek medical attention

**Inhalation:** If adverse effects occur, remove to uncontaminated area. If not breathing, give artificial respiration or oxygen by qualified personnel. Seek immediate medical attention

**Skin Contact:** Use good hygiene practices including washing of skin with soap and water. If irritation occurs, seek medical attention

**Ingestion:** If a large amount is swallowed, get medical attention

### Most Important Symptoms/Effects, Acute and Delayed

#### Potential Acute Health Effects

Eye Contact	No known significant effects or critical hazards
Inhalation	No known significant effects or critical hazards
Skin Contact	No known significant effects or critical hazards
Ingestion	No known significant effects or critical hazards

#### Over-Exposure Signs/Symptoms

Eye Contact	No known significant effects or critical hazards
Inhalation	Long term exposure to high airborne concentrations may result in inflammation of the small airways and asthma-like symptoms
Skin Contact	No known significant effects or critical hazards
Ingestion	No known significant effects or critical hazards

### Indication of any Immediate Medical Attention and Special Treatment Needed

Treat symptomatically. Seek medical care if large quantities have been ingested or inhaled.

## 5. FIREFIGHTING MEASURES

### Suitable Extinguishing Media

Use fire extinguishing media appropriate for surrounding materials

### Unsuitable Extinguishing Media

None Known

**Special Hazards Arising from the Chemical**

No specific fire or explosion hazard

**Hazardous Thermal Decomposition Products**

None Known

**Special Protective Actions for Firefighters**

No special measures are required

**Special Protective Equipment for Firefighters**

As appropriate, fire-fighters should wear protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

---

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment and Emergency Procedures**

**For Non-Emergency Personnel**

Products are naturally occurring earthen materials and may become alkaline when damp. No special precautions are known.

**For Emergency Responders**

Products are naturally occurring earthen materials and may become alkaline when damp. No special precautions are known.

**Environmental Precautions**

Products are earthen materials and may become alkaline when damp. No special precautions are known.

**Methods and Material for Containment and Cleaning Up**

Handle wastes in accordance with local requirements.

---

**7. HANDLING AND STORAGE**

**Precautions for Safe Handling**

Wear personal protective equipment in accordance with those recommendations provided in Section 8. Use good hygiene practices and wash hands and face before eating, drinking or conducting personal hygiene. Reduce contamination from clothing and protective equipment before entering eating areas.

**Conditions for Safe Storage, Including any Incompatibilities**

Store in accordance with local regulations

---

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure Limits:**

OSHA (PEL): 15 mg/m<sup>3</sup> (TWA, total particulates, not otherwise regulated)  
5 mg/m<sup>3</sup> (TWA, respirable particulates, not otherwise regulated)

ACGIH (TLV): 10 mg/m<sup>3</sup> (TWA, inhalable particulates, not otherwise regulated)  
3 mg/m<sup>3</sup> (TWA, respirable particulates, not otherwise regulated)

**Engineering Controls:** Observe occupational exposure limits and provide local ventilation as necessary to control dust inhalation.

**Personal Protection:**

**Hygiene Measures:** No specific recommendation made, but good hygiene practices are advised. Wash hands, forearms and face after handling products and prior to eating, smoking and using the lavatory. Launder contaminated clothing before reuse.

**Eye/Face Protection:** Wear eye protection where there is danger of eye contact. Provide eyewash stations to carefully rinse product from eyes should contact be made.

**Skin and Body Protection:** No specific protection noted, but gloves and coveralls may be used wherever processes create significant levels of skin contact. Wash hands at the end of each work shift and before eating, smoking and personal hygiene.

**Respiratory Protection:** No specific recommendation made, but appropriate respiratory protection must be used where general dust levels exceed occupational exposure limits. If needed to prevent irritation, wear appropriate protection in high dust conditions and affected work areas.

---

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	Solid
<b>Color:</b>	Grey to Brown
<b>Upper/lower flammability/explosive limits:</b>	Not Applicable
<b>Odor:</b>	No Distinctive Odor
<b>Odor threshold:</b>	Not Applicable
<b>Vapor pressure:</b>	Not Applicable
<b>Vapor density:</b>	Not Applicable
<b>pH:</b>	Not Applicable (forms alkaline solution when damp)
<b>Specific Gravity:</b>	1.8 – 2.7
<b>Melting/Freezing point:</b>	>700 °C (>1,400 °F)/None-Solid
<b>Solubility(ies)</b>	Water: 0.05% by weight
<b>Initial boiling point and boiling range:</b>	>1093 °C (>2,000 °F)
<b>Partition coefficient: n-octanol/water:</b>	Not Available
<b>Flash point:</b>	Not Applicable
<b>Auto-ignition temperature:</b>	Not Applicable
<b>Evaporation rate</b>	Not Available
<b>Decomposition temperature:</b>	Not Available
<b>Flammability (solid, gas):</b>	Not Applicable
<b>Granulometry:</b>	Fine Powder (>75% @ <45µm)

---

## 10. STABILITY AND REACTIVITY

### Reactivity

Stable under normal temperature conditions.

### Chemical Stability

These products are stable.

### Possibility of Hazardous Reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

### Conditions to Avoid

Product may become alkaline when damp.

### Incompatible Materials

None relative to designed use.

### Hazardous Decomposition Products

Hazardous decomposition products should not be produced under normal conditions of storage and use.

---

## 11. TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects

**Acute Toxicity:** No Known Significant Effects or Critical Hazards.

**Irritation/Corrosion:** No Known Significant Effects or Critical Hazards.

**Sensitization:** No Known Significant Effects or Critical Hazards.

**Mutagenicity:** No Known Significant Effects or Critical Hazards.

**Carcinogenicity:** No Known Significant Effects or Critical Hazards.

**Reproductive Toxicity:** No Known Significant Effects or Critical Hazards.

**Teratogenicity:** No Known Significant Effects or Critical Hazards.

**Specific Target Organ Toxicity (Single Exposure):** No Known Significant Effects or Critical Hazards.

**Specific Target Organ Toxicity (Repeated Exposure):** No Known Significant Effects or Critical Hazards.

**Aspiration Hazard:** No Known Significant Effects or Critical Hazards.

## Information on the Likely Routes of Exposure (Dermal Contact, Eye Contact, Inhalation, Ingestion)

### Potential Acute Health Effects

**Eye Contact:** No Known Significant Effects or Critical Hazards.

**Inhalation:** No Known Significant Effects or Critical Hazards.

**Skin Contact:** No Known Significant Effects or Critical Hazards.

**Ingestion:** No Known Significant Effects or Critical Hazards.

### Symptoms Related to the Physical, Chemical and Toxicological Characteristics

**Eye Contact:** May cause slight irritation, watering and redness.

**Inhalation:** May be irritating to nose, throat and respiratory tract.

**Skin Contact:** May be irritating to skin – can cause irritant/contact dermatitis.

**Ingestion:** May cause abdominal discomfort.

### Delayed and Immediate Effects - Chronic Effects from Short and Long Term Exposure

#### Short Term Exposure

**Potential Immediate Effects:** No Known Significant Effects or Critical Hazards.

**Potential Immediate Effects:** No Known Significant Effects or Critical Hazards.

#### Long Term Exposure

**Potential Immediate Effects:** No Known Significant Effects or Critical Hazards.

**Potential Immediate Effects:** No Known Significant Effects or Critical Hazards.

### Potential Chronic Health Effects

**General:** No Known Significant Effects or Critical Hazards.

**Carcinogenicity:** No Known Significant Effects or Critical Hazards.

**Mutagenicity:** No Known Significant Effects or Critical Hazards.

**Teratogenicity:** No Known Significant Effects or Critical Hazards.

**Developmental Effects:** No Known Significant Effects or Critical Hazards.

**Fertility Effects:** No Known Significant Effects or Critical Hazards.

### Numerical Measures of Toxicity

**Acute Toxicity Estimates:** No data available for this product.

**Toxicity:** No data available for this product.

**Persistence and Degradability:** No data available for this product.

**Bioaccumulative Potential:** No data available for this product.

**Mobility in Soil (Soil/Water Partition Coefficient):** No data available for this product.

**Other Adverse Effects:** No Known Significant Effects or Critical Hazards.

---

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Not regarded as dangerous for the environment.

### Acute Fish Toxicity

Not considered toxic to fish.

### Persistence and Degradability

These products are not readily biodegradable.

**Bioaccumulative Potential**

These products are not bioaccumulating.

**Mobility in Soil**

Not relevant, due to the form of the products.

**Other Adverse Effects**

None. Combustion products represent a heat processed inorganic, inert material that do not generally constitute an environmental hazard.

**13. DISPOSAL CONSIDERATIONS****Waste Treatment Methods**

Dispose of waste and residues in accordance with local authority requirements. These products are not considered a hazardous waste under RCRA (40 CFR Part 261).

**14. TRANSPORT INFORMATION**

	<b>DOT Classification</b>	<b>IMDG</b>	<b>IATA</b>
<b>UN Number</b>	Not Regulated	Not Regulated	Not Regulated
<b>UN Proper Shipping Name</b>	--	--	--
<b>Transport Hazard Class(s)</b>	--	--	--
<b>Packing Group</b>	--	--	--
<b>Environmental Hazards</b>	No	No	No
<b>Additional Information</b>	--	--	--

AERG : Not applicable

**Special Precautions for User:** Not regarded as a danger under local handling conditions

**15. REGULATORY INFORMATION****US Federal Regulations****TSCA 8(a) CDR Exempt/Partial exemption**

Not determined

**United States Inventory (TSCA 8b)**

Not determined

**Clean Air Act Section 112(b) Hazardous Air Pollutants (HAP's)**

Not listed

**Clean Air Act Section 602 Class I Substances**

Not listed

**Clean Air Act Section 602 Class II Substances**

Not listed

**DEA List I Chemicals (Precursor Chemicals)**

Not Listed

**DEA List II Chemicals (Essential Chemicals)**

Not Listed

**SARA 302/304 - Composition/Information on Ingredients**

No products were found

**SARA 313/304 RQ**

Not Applicable

**SARA 311/312 - Classification**

Not Applicable

**SARA 313**

There is no data available

**State Regulations**

**California Proposition 65 Components**

These products do not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm at levels above the “safe harbor” designation. Trace component concentrations are so low that they create no significant exposure risk of cancer, birth defects or other reproductive harm.

**Other State Right to Know Components**

No investigation of State and Local requirements was performed. For details on these regulatory requirements, contact the appropriate agencies within your region.

---

**16. OTHER INFORMATION**

**Procedures Used to Drive Classification**

Classification	Justification
Not Classified	Toxicology Library and Available Databases

**Further Information**

License granted to make unlimited paper copies for internal use only. The above information is believed to be correct as of the date of preparation and does not purport to be all inclusive or account for naturally occurring variation in the composition of raw ores. It therefore, represents no guarantee of the properties associated with these products.

The information in this document should be used only as a guide in applying the appropriate safety precautions and professional consultation is advised. Should naturally occurring variation cause significant change in product composition, this information will undergo revision as appropriate. Phoenix Cement Company and its Affiliates shall not be held liable for any damage resulting from the end user’s handling or contact with these products.

**Document History**

**Version:** 1.0

**Revision Date:** 03/14/2017