# Cement Kiln Dust (CKD)

**Safety Data Sheet**


Date of issue: 01/10/2014  
Revision date: 04/06/2018  
Version: 2.0

## SECTION 1: Identification

### 1.1. Identification

<table>
<thead>
<tr>
<th>Product form</th>
<th>Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product name</td>
<td>Cement Kiln Dust (CKD)</td>
</tr>
</tbody>
</table>

### 1.2. Recommended use and restrictions on use

Use of the substance/mixture: Soil stabilization and linings.

### 1.3. Supplier

Ash Grove Cement Company  
11011 Cody  
Overland Park, KS 66210  
T 913-451-8900

### 1.4. Emergency telephone number

Emergency number: CHEMTREC (800) 424-9300

## SECTION 2: Hazard(s) identification

### 2.1. Classification of the substance or mixture

<table>
<thead>
<tr>
<th>GHS-US classification</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Corr. 1A</td>
<td>Eye Dam. 1</td>
</tr>
<tr>
<td>Carc. 1A</td>
<td>Repr. 1A</td>
</tr>
<tr>
<td>STOT RE 1</td>
<td></td>
</tr>
</tbody>
</table>

### 2.2. GHS Label elements, including precautionary statements

#### GHS-US labeling

**Hazard pictograms (GHS-US):**

#### Signal word (GHS-US): Danger

#### Hazard statements (GHS-US):

- Causes severe skin burns and eye damage
- May cause cancer
- May damage fertility or the unborn child
- Causes damage to organs (lungs) through prolonged or repeated exposure

#### Precautionary statements (GHS-US):

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Do not breathe dust
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Wear eye protection, face protection, protective clothing, protective gloves.
- If exposed or concerned: Get medical advice/attention.
- If swallowed: rinse mouth. Do NOT induce vomiting
- If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
- Wash contaminated clothing before reuse.
- If inhaled: Remove person to fresh air and keep comfortable for breathing
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- Immediately call a poison center or doctor
- Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

#### Supplemental Information:

Read and Follow all precautions listed in the Safety Data Sheet available on request or at Ashgrovepkg.com. Additional information on the selection and use of respirators can be found in the NIOSH Respirator Selection Logic (DHHS [NIOSH] Publication No. 2005-100) and the NIOSH Guide to Industrial Respiratory Protection (DHHS [NIOSH] Publication No. 87-116) available at [http://www.cdc.gov/niosh/docs/87-116/](http://www.cdc.gov/niosh/docs/87-116/).
This product contains greater than 0.1% crystalline silica. Crystalline silica has been linked to cancer, silicosis, and other lung problems in conditions of prolonged airborne over-exposure. Keep product dry until use. Avoid contact with bleed water from wet product. Clothing saturated with wet product can result in delayed, serious alkali skin burns.

### 2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification: Not applicable.

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

Not applicable

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flue dust, portland cement</td>
<td>(CAS-No.) 68475-76-3</td>
<td>40 - 95</td>
</tr>
<tr>
<td>Calcium oxide</td>
<td>(CAS-No.) 1305-78-8</td>
<td>5 - 55</td>
</tr>
<tr>
<td>Quartz</td>
<td>(CAS-No.) 14808-60-7</td>
<td>1.5 - 6</td>
</tr>
<tr>
<td>Lead</td>
<td>(CAS-No.) 7439-92-1</td>
<td>≤ 0.2</td>
</tr>
</tbody>
</table>

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

- **First-aid measures after inhalation**: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical advice/attention.
- **First-aid measures after skin contact**: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing. Wash contaminated clothing before reuse. Get immediate medical advice/attention.
- **First-aid measures after eye contact**: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get medical attention immediately.
- **First-aid measures after ingestion**: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

#### 4.2. Most important symptoms and effects (acute and delayed)

- **Symptoms/effects after inhalation**: May cause respiratory irritation.
- **Symptoms/effects after skin contact**: Causes severe skin burns. Symptoms may include redness, pain, blisters. Do not allow product to harden around any body part or allow continuous, prolonged contact with skin.
- **Symptoms/effects after eye contact**: Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.
- **Symptoms/effects after ingestion**: Harmful if swallowed. May cause stomach distress, nausea or vomiting.

#### 4.3. Immediate medical attention and special treatment, if necessary

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

- **Suitable extinguishing media**: Treat for surrounding material.
- ** Unsuitable extinguishing media**: Do not use a solid water stream as it may scatter and spread fire.

#### 5.2. Specific hazards arising from the chemical

- **Fire hazard**: Product does not burn; however its packaging may. Products of combustion may include and are not limited to: oxides of carbon.
- **Reactivity**: No dangerous reaction known under conditions of normal use.

#### 5.3. Special protective equipment and precautions for fire-fighters

**Firefighting instructions**: Keep upwind of fire. Wear full firefighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).
SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Avoid contact with skin and eyes.

6.1.1. For non-emergency personnel
No additional information available

6.1.2. For emergency responders
No additional information available

6.2. Environmental precautions
No additional information available

6.3. Methods and material for containment and cleaning up

For containment: Contain spill, then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up: Vacuum or sweep material and place in a disposal container. Provide ventilation.

6.4. Reference to other sections
For further information refer to section 8: “Exposure controls/personal protection”

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Avoid contact with skin and eyes. Avoid generating and breathing dust. Do not swallow. Good housekeeping is important to prevent accumulation of dust. The use of compressed air for cleaning clothing, equipment, etc. is not recommended. Handle and open container with care.

Hygiene measures: Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Keep out of the reach of children. Store in a well-ventilated place. Keep container tightly closed. Avoid any dust buildup by frequent cleaning and suitable construction of the storage area. Do not store in an area equipped with emergency water sprinklers. Clean up spilled material promptly.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Substance</th>
<th>ACGIH TWA (mg/m³)</th>
<th>OSHA PEL (mg/m³)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flue dust, portland cement (68475-76-3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA ACGIH</td>
<td>ACGIH TLV (mg/m³)</td>
<td>10 mg/m³ (as inhalable fraction, PNOS)</td>
<td></td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (mg/m³)</td>
<td>3 mg/m³ (as respirable fraction, PNOS)</td>
<td></td>
</tr>
<tr>
<td>Calcium oxide (1305-78-8)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACGIH</td>
<td>ACGIH TWA (mg/m³)</td>
<td>2 mg/m³</td>
<td></td>
</tr>
<tr>
<td>OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>5 mg/m³</td>
<td></td>
</tr>
<tr>
<td>IDLH</td>
<td>US IDLH (mg/m³)</td>
<td>25 mg/m³</td>
<td></td>
</tr>
<tr>
<td>NIOSH</td>
<td>NIOSH REL (TWA) (mg/m³)</td>
<td>2 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Quartz (14808-60-7)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACGIH</td>
<td>ACGIH TWA (mg/m³)</td>
<td>0.025 mg/m³ (respirable particulate matter)</td>
<td></td>
</tr>
<tr>
<td>OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>50 µg/m³</td>
<td></td>
</tr>
<tr>
<td>OSHA</td>
<td>Remark (OSHA)</td>
<td>Table Z-3. For OSHA PEL (TWA): Use formulas: (250 / (%SiO2+5)) for mppcf and (10 mg/m3 / (%SiO2+2)) for mg/m3. CAS No. source: eCFR Table Z-1.</td>
<td></td>
</tr>
<tr>
<td>OSHA</td>
<td>Regulatory reference (US-OSHA)</td>
<td>OSHA Annotated Table Z-3 Mineral Dusts</td>
<td></td>
</tr>
<tr>
<td>IDLH</td>
<td>US IDLH (mg/m³)</td>
<td>50 mg/m³ (respirable dust)</td>
<td></td>
</tr>
<tr>
<td>NIOSH</td>
<td>NIOSH REL (TWA) (mg/m³)</td>
<td>0.05 mg/m³ (respirable dust)</td>
<td></td>
</tr>
</tbody>
</table>
Cement Kiln Dust (CKD)
Safety Data Sheet

### Lead (7439-92-1)

<table>
<thead>
<tr>
<th></th>
<th>ACGIH TWA (mg/m³)</th>
<th>OSHA PEL (TWA) (mg/m³)</th>
<th>US IDLH (mg/m³)</th>
<th>NIOSH REL (TWA) (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td></td>
<td>0.05 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSHA</td>
<td></td>
<td>50 µg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IDLH</td>
<td></td>
<td>100 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NIOSH</td>
<td></td>
<td>0.05 mg/m³</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 8.2. Appropriate engineering controls

- **Appropriate engineering controls**: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.
- **Environmental exposure controls**: Maintain levels below Community environmental protection thresholds.

#### 8.3. Individual protection measures/Personal protective equipment

**Hand protection:**

Wear suitable gloves resistant to chemical penetration.

**Eye protection:**

Wear approved eye protection (properly fitted dust- or splash-proof chemical safety goggles) and face protection (face shield).

**Skin and body protection:**

Wear suitable clothing common to do-it-yourself projects.

**Respiratory protection:**

A NIOSH approved dust mask or filtering facepiece is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA’s respirator standard (29 CFR 1910.134) and ANSI’s standard for respiratory protection (Z88.2).

**Other information:**

Handle according to established industrial hygiene and safety practices. Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking.

#### SECTION 9: Physical and chemical properties

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

- **Physical state**: Dry powder.
- **Appearance**: Fine powder.
- **Color**: Buff.
- **Odor**: No odour.
- **Odor threshold**: No data available.
- **pH**: 12 - 12.5 (Highly alkaline when wet.)
- **Melting point**: No data available.
- **Freezing point**: No data available.
- **Boiling point**: No data available.
- **Flash point**: No data available.
- **Relative evaporation rate (butyl acetate=1)**: No data available.
- **Flammability (solid, gas)**: Not flammable.
- **Vapor pressure**: No data available.
- **Relative vapor density at 20 °C**: No data available.
- **Relative density**: 2.82 (Water = 1).
- **Solubility**: 1 - 12 %.
- **Partition coefficient n-octanol/water**: No data available.
- **Auto-ignition temperature**: No data available.
- ** Decomposition temperature**: No data available.
- **Viscosity, kinematic**: No data available.
- **Viscosity, dynamic**: No data available.
- **Explosion limits**: No data available.
Cement Kiln Dust (CKD)
Safety Data Sheet

Explosive properties : No data available
Oxidizing properties : No data available

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
No dangerous reaction known under conditions of normal use. An alkali reaction from components of portland cement will corrode aluminum.

10.2. Chemical stability
Calcium oxide and calcium hydroxide, if present in ASH GROVE CEMENT KILN DUST (CKD), will gradually absorb carbon dioxide when exposed to air, forming calcium carbonate. ASH GROVE CEMENT KILN DUST (CKD) consolidates when mixed with water. The resulting dry material sets loosely, preventing the material from becoming airborne. With excess water, calcium oxide and calcium hydroxide which may be present in freshly generated ASH GROVE CEMENT KILN DUST (CKD) can form a corrosive solution, pH 12-12.5.

10.3. Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use. Do not mix with other chemicals.

10.4. Conditions to avoid
Moisture – product must be kept dry until ready to use.

10.5. Incompatible materials
Contact with mineral acids will cause evolution of carbon dioxide with production of heat.

10.6. Hazardous decomposition products
None known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity : Not classified
Skin corrosion/irritation : Causes severe skin burns
                      pH: 12 - 12.5
Serious eye damage/irritation : Causes serious eye damage.
                      pH: 12 - 12.5
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : May cause cancer.

Quartz (14808-60-7)
IARC group 1 - Carcinogenic to humans
National Toxicology Program (NTP) Status Known Human Carcinogens
In OSHA Hazard Communication Carcinogen list Yes

Lead (7439-92-1)
IARC group 2A - Probably carcinogenic to humans
National Toxicology Program (NTP) Status Reasonably anticipated to be Human Carcinogen
In OSHA Hazard Communication Carcinogen list Yes

Reproductive toxicity : May damage fertility or the unborn child.
Specific target organ toxicity – single exposure : Not classified
Specific target organ toxicity – repeated exposure : Causes damage to organs (lungs) through prolonged or repeated exposure.
(Respirable crystalline silica in the form of quartz or cristobalite from occupational sources is listed by the International Agency for Research on Cancer (IARC) and National Toxicology Program (NTP) as a lung carcinogen. Prolonged exposure to respirable crystalline silica has been known to cause silicosis, a lung disease, which may be disabling. While there may be a factor of individual susceptibility to a given exposure to respirable silica dust, the risk of contracting silicosis and the severity of the disease is clearly related to the amount of dust exposure and the length of time (usually years) of exposure.)
Aspiration hazard : Not classified
Cement Kiln Dust (CKD)
Safety Data Sheet

| Symptoms/effects after inhalation | May cause respiratory irritation. |
| Symptoms/effects after skin contact | Causes severe skin burns. Symptoms may include redness, pain, blisters. Do not allow product to harden around any body part or allow continuous, prolonged contact with skin. |
| Symptoms/effects after eye contact | Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns. |
| Symptoms/effects after ingestion | Harmful if swallowed. May cause stomach distress, nausea or vomiting. |
| Other information | Likely routes of exposure: ingestion, inhalation, skin and eye. |

**SECTION 12: Ecological information**

12.1. **Toxicity**

Ecology - general: No ecological consideration when used according to directions. Normal dilution of this product to drains, sewers, septic systems and treatment plants is not considered environmentally harmful.

- **Calcium oxide (1305-78-8)**
  - LC50 fish 1: 1070 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [static])

- **Lead (7439-92-1)**
  - LC50 fish 1: 0.44 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [semi-static])
  - EC50 Daphnia 1: 600 μg/l (Exposure time: 48 h - Species: water flea)
  - LC50 fish 2: 1.17 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])

12.2. **Persistence and degradability**

- **Cement Kiln Dust (CKD)**
  - Persistence and degradability: No data available.

12.3. **Bioaccumulative potential**

- **Cement Kiln Dust (CKD)**
  - Bioaccumulative potential: No data available.

- **Calcium oxide (1305-78-8)**
  - BCF fish 1: (no bioaccumulation)

12.4. **Mobility in soil**

- **Cement Kiln Dust (CKD)**
  - Ecology - soil: No data available.

12.5. **Other adverse effects**

- Other adverse effects: No data available.

**SECTION 13: Disposal considerations**

13.1. **Disposal methods**

Product/Packaging disposal recommendations: This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

**SECTION 14: Transport information**

**Department of Transportation (DOT)**

In accordance with DOT
Not regulated

**SECTION 15: Regulatory information**

15.1. **US Federal regulations**

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory
WARNING This product can expose you to Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information

Date of issue : 01/10/2014
Revision date : 11/20/2017
Other information : None.
Prepared by : Nexreg Compliance Inc.

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