Cement Kiln Dust

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

Revision Date: 04/17/2015 Date of issue: 03/12/2015

Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Substance

Product Name: Cement Kiln Dust

CAS No: 68475-76-3

Synonyms: Cement Kiln Dust (CKD), Kiln Dust, and Cement Lime

1.2. Intended Use of the Product

Use of the substance/mixture: This product consists of dust that is extracted off the back of the rotary kiln system. Kiln dust is used in the manufacture of bricks, mortar, cement, concrete, plasters, paving materials, and other manufacturing applications.

1.3. Name, Address, and Telephone of the Responsible Party

Manufacturer

Central Plains Cement

2609 N. 145th East Ave

74116 Tulsa, OK - USA

T 918-437-3902

www.centralplainscement.com

Manufacturer

Central Plains Cement

200 N Courtney Road

64050 Sugar Creek, MO - USA

T 816-257-3683

1.4. Emergency Telephone Number

Emergency Number: 816-257-3676

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Classification (GHS-US)

Skin Corr. 1A

Eye Dam. 1

Skin Sens. 1

STOT SE 3

Hazard Statements (GHS-US)

H314 - Causes severe skin burns and eye damage.

H317 - May cause an allergic skin reaction.

H318 - Causes serious eye damage.

H335 - May cause respiratory irritation.

Precautionary Statements (GHS-US)

P260 - Do not breathe dust.

P264 - Wash hands, forearms, and exposed areas thoroughly after handling.

P271 - Use only outdoors or in a well-ventilated area.

P272 - Contaminated work clothing must not be allowed out of the workplace.

P280 - Wear eye protection, face protection, protective clothing, and protective gloves.

P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a POISON CENTER, a doctor.

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

P362+P364 - Take off contaminated clothing and wash it before reuse.

P403+P405 - Store in a well-ventilated place. Keep container tightly closed.
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PS01 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

2.3. Other Hazards
Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US)
No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance
Name: Cement Kiln Dust

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
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<tbody>
<tr>
<td>Flue dust, portland cement</td>
<td>(CAS No) 68475-76-3</td>
<td>100</td>
<td>Skin Irr. 2, H315</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Dam. 1, H318</td>
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<td></td>
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<td>Skin Sens. 1, H317</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>STOT SE 3, H335</td>
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</tbody>
</table>

Composition of the above

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<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium Carbonate</td>
<td>(CAS No) 1317-65-3</td>
<td>10 - 80</td>
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<tr>
<td>Calcium Oxide</td>
<td>(CAS No) 1305-78-8</td>
<td>5 - 50</td>
</tr>
<tr>
<td>Magnesium Oxide</td>
<td>(CAS No) 1309-48-4</td>
<td>0 - 2</td>
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<tr>
<td>Crystalline Silica</td>
<td>(CAS No) 1408-60-7</td>
<td>0 - 10</td>
</tr>
</tbody>
</table>

3.2. Mixture
Not applicable

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).
First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.
First-aid Measures After Skin Contact: Remove contaminated clothing. Immediately flush skin with plenty of water for at least 60 minutes. Get medical advice/attention. Wash contaminated clothing before reuse.
First-aid Measures After Eye Contact: Rinse cautiously with water for at least 60 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.
First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/Injuries: Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause respiratory irritation.
Symptoms/Injuries After Inhalation: May cause respiratory irritation.
Symptoms/Injuries After Skin Contact: Causes severe skin burns. May cause an allergic skin reaction.
Symptoms/Injuries After Eye Contact: Causes serious eye damage.
Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects. Cement kiln dust should not be eaten under any circumstances.

Chronic Symptoms: Repeated or prolonged exposure to respirable (airborne) crystalline silica dust will cause lung damage in the form of silicosis. Symptoms will include progressively more difficult breathing, cough, fever, and weight loss.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed
If you feel unwell, seek medical advice.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media
Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.
 Unsuitable Extinguishing Media: Do not use a heavy water stream.

5.2. Special Hazards Arising From the Substance or Mixture
Fire Hazard: Non-combustible.
Explosion Hazard: Product is not explosive.
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Reactivity: Wet cement kiln dust is alkaline and is incompatible with acids, ammonium salts and aluminum metal. Cement kiln dust dissolves in hydrofluoric acid, producing corrosive silicon tetrafluoride gas. Cement kiln dust reacts with water to form silicates and calcium hydroxide. Silicates react with powerful oxidizers such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride.

5.3. Advice for Firefighters
Precautionary Measures Fire: Exercise caution when fighting any chemical fire.
Firefighting Instructions: Do not allow run-off from fire fighting to enter drains or water sources. Do not breathe fumes or vapors from fire.
Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.
Other Information: Refer to Section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures
General Measures: Avoid all contact with skin, eyes, or clothing. Do not breathe dust.
6.1.1. For Non-emergency Personnel
Protective Equipment: Use appropriate personal protection equipment (PPE).
6.1.2. For Emergency Responders
Protective Equipment: Equip cleanup crew with proper protection.
Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental Precautions
Prevent entry to sewers and public waters.

6.3. Methods and Material for Containment and Cleaning Up
For Containment: Contain and collect as any solid. Avoid creating or spreading dust.
Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Recover the spillage in a dry state if possible. Minimize generation of airborne dust. The product can be slurried by the addition of water but will subsequently set as a hard material. Keep children away from the clean-up operation. Transfer spilled material to a suitable container for disposal. Utilize a dust suppressant when removing mechanically.

6.4. Reference to Other Sections
See heading 8, Exposure Controls and Personal Protection. Concerning disposal elimination after cleaning, see item 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling
Precautions for Safe Handling: Do not breathe dust. Use only outdoors or in a well-ventilated area.
Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do not eat, drink or smoke when using this product.

7.2. Conditions for Safe Storage, Including Any Incompatibilities
Technical Measures: Comply with applicable regulations.
Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use.

7.3. Specific End Use(s) This product consists of dust that is extracted off the back of the rotary kiln system. Kiln dust is used in the manufacture of bricks, mortar, cement, concrete, plasters, paving materials, and other manufacturing applications.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters
For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), or OSHA (PEL).

8.2. Exposure Controls
Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.
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Materials for Protective Clothing: Corrosion-proof clothing.
Hand Protection: Wear chemically resistant protective gloves.
Eye Protection: Chemical safety goggles and face shield.
Skin and Body Protection: Wear suitable protective clothing.
Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

Environmental Exposure Controls: Avoid release to the environment.
Consumer Exposure Controls: Do not eat, drink or smoke during use.
Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State: Solid
Appearance: Gray or white powder
Odor: No distinct odor
Odor Threshold: No data available
pH: 12 - 13 (in water)
Evaporation Rate: No data available
Melting Point: No data available
Freezing Point: No data available
Boiling Point: > 1000 °C (1832.00 °F)
Flash Point: No data available
Auto-ignition Temperature: No data available
Decomposition Temperature: No data available
Flammability (solid, gas): No data available
Vapor Pressure: No data available
Relative Vapor Density at 20 °C: No data available
Relative Density: No data available
Specific Gravity: 3-3.2
Solubility: Water: Slightly soluble (0.1 to 1%)
Partition Coefficient: N-Octanol/Water: No data available
Viscosity: No data available

9.2. Other Information: No additional information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Wet cement kiln dust is alkaline and is incompatible with acids, ammonium salts and aluminum metal. Cement kiln dust dissolves in hydrofluoric acid, producing corrosive silicon tetrafluoride gas. Cement kiln dust reacts with water to form silicates and calcium hydroxide. Silicates react with powerful oxidizers such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride.

10.2. Chemical Stability: Stable under normal ambient conditions.

10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

10.4. Conditions to Avoid: Direct sunlight. Extremely high or low temperatures. Incompatible materials.


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 and eye damage.
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pH: 12 - 13 (in water)
Serious Eye Damage/Irritation: Causes serious eye damage.
pH: 12 - 13 (in water)
Respiratory or Skin Sensitization: May cause an allergic skin reaction.
Germ Cell Mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive Toxicity: Not classified
Specific Target Organ Toxicity (Single Exposure): May cause respiratory irritation.
Specific Target Organ Toxicity (Repeated Exposure): Not classified
Aspiration Hazard: Not classified
Symptoms/Injuries After Inhalation: May cause respiratory irritation.
Symptoms/Injuries After Skin Contact: Causes severe skin burns. May cause an allergic skin reaction.
Symptoms/Injuries After Eye Contact: Causes serious eye damage.
Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects. Cement kiln dust should not be eaten under any circumstances.
Chronic Symptoms: Repeated or prolonged exposure to respirable (airborne) crystalline silica dust will cause lung damage in the form of silicosis. Symptoms will include progressively more difficult breathing, cough, fever, and weight loss.

SECTION 12: ECOLOGICAL INFORMATION
12.1. Toxicity  No additional information available
12.2. Persistence and Degradability
Cement Kiln Dust
Persistence and Degradability: Not established.
12.3. Bioaccumulative Potential
Cement Kiln Dust
Bioaccumulative Potential: Not established.
12.4. Mobility in Soil  No additional information available
12.5. Other Adverse Effects
Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS
13.1. Waste treatment methods
Sewage Disposal Recommendations: Do not empty into drains. Do not dispose of waste into sewer.
Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, and international regulations.

SECTION 14: TRANSPORT INFORMATION
14.1. In Accordance with DOT  Not regulated for transport
14.2. In Accordance with IMDG  Not regulated for transport
14.3. In Accordance with IATA  Not regulated for transport

SECTION 15: REGULATORY INFORMATION
15.1 US Federal Regulations
Cement Kiln Dust
SARA Section 311/312 Hazard Classes: Immediate (acute) health hazard
Delayed (chronic) health hazard
Flue dust, portland cement (68475-76-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
15.2 US State Regulations  Neither this product nor its chemical components appear on any US state lists.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION
Revision Date: 04/17/2015
Other Information: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.
GHS Full Text Phrases:
Eye Dam. 1: Serious eye damage/eye irritation Category 1
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<tbody>
<tr>
<td>Skin Corr. 1A</td>
<td>Skin corrosion/irritation Category 1A</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion/irritation Category 2</td>
</tr>
<tr>
<td>Skin Sens. 1</td>
<td>Skin sensitization Category 1</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity (single exposure) Category 3</td>
</tr>
<tr>
<td>H314</td>
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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)