SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture
Product Name: Portland Cement

1.2. Intended Use of the Product

Concrete mixes for construction

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 H314
Eye Dam. 1 H318
Skin Sens. 1 H317
STOT SE 3 H335

Full text of H-phrases: see section 16

2.2. Label Elements

GHS-US Labeling
Hazard Pictograms (GHS-US):

Signal Word (GHS-US): Danger
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.
P302+P352 - IF ON SKIN: Wash with plenty of water.
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+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local, regional, national,
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
Not applicable

### 3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cement, portland, chemicals</td>
<td>(CAS No) 65997-15-1</td>
<td>30 - 100</td>
<td>Skin Irrit. 2, H315 Eye Dam. 1, H318</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Sens. 1, H317 STOT SE 3, H335</td>
</tr>
<tr>
<td>Limestone</td>
<td>(CAS No) 1317-65-3</td>
<td>0 - 50</td>
<td>Not classified</td>
</tr>
<tr>
<td>Calcium hydroxide</td>
<td>(CAS No) 1305-62-0</td>
<td>0 - 20</td>
<td>Skin Irrit. 2, H315 Eye Dam. 1, H318</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Sens. 1, H317 STOT SE 3, H335</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic Acute 3, H402</td>
</tr>
<tr>
<td>Gypsum (Ca(SO4).2H2O)</td>
<td>(CAS No) 13397-24-5</td>
<td>2 - 10</td>
<td>Not classified</td>
</tr>
<tr>
<td>Calcium oxide</td>
<td>(CAS No) 1305-78-8</td>
<td>0 - 5</td>
<td>Skin Irrit. 2, H315 Eye Dam. 1, H318</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Instant SE 3, H335</td>
</tr>
<tr>
<td>Magnesium oxide (MgO)</td>
<td>(CAS No) 1309-48-4</td>
<td>0 - 4</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

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).

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: Dust 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 should not be eaten under any circumstances.

Chronic Symptoms: Portland cement may contain trace amounts (<0.1%) of free crystalline silica. 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.

 Reactivity: Wet cement is alkaline and is incompatible with acids, ammonium salts and aluminum metal. Cement dissolves in hydrofluoric acid, producing corrosive silicon tetrafluoride gas. Cement 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)

Concrete mixes for construction

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).

<table>
<thead>
<tr>
<th>Substance</th>
<th>Control Parameter</th>
<th>Exposure Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cement, portland, chemicals (65997-15-1)</td>
<td>USA ACGIH ACGIH TWA (mg/m³)</td>
<td>1 mg/m³ (particulate matter containing no asbestos and &lt;1% crystalline silica, respirable fraction)</td>
</tr>
<tr>
<td></td>
<td>USA ACGIH ACGIH chemical category</td>
<td>Not Classifiable as a Human Carcinogen</td>
</tr>
<tr>
<td></td>
<td>USA NIOSH NIOSH REL (TWA) (mg/m³)</td>
<td>10 mg/m³ (total dust) 5 mg/m³ (respirable dust)</td>
</tr>
<tr>
<td></td>
<td>USA IDLH US IDLH (mg/m³)</td>
<td>5000 mg/m³</td>
</tr>
</tbody>
</table>
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.


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.

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

Evaporation Rate: No data available
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### Melting Point
- No data available

### Freezing Point
- No data available

### Boiling Point
- > 1000 °C (1832 °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
- 3.15

### 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 is alkaline and is incompatible with acids, ammonium salts and aluminum metal. Cement dissolves in hydrofluoric acid, producing corrosive silicon tetrafluoride gas. Cement 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.

10.5. Incompatible Materials:

10.6. Hazardous Decomposition Products:
- None known.

### SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information On Toxicological Effects

Acute Toxicity: Not classified

<table>
<thead>
<tr>
<th>Substance</th>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium hydroxide (1305-62-0)</td>
<td>LD50 Oral Rat</td>
<td>7340 mg/kg</td>
</tr>
<tr>
<td>Calcium oxide (1305-78-8)</td>
<td>LD50 Oral Rat</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal Rabbit</td>
<td>&gt; 2500 mg/kg</td>
</tr>
</tbody>
</table>

Skin Corrosion/Irritation: Causes severe skin burns and eye damage.

pH: 12 - 13

Serious Eye Damage/Irritation: Causes serious eye damage.

pH: 12 - 13

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: Dust 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 should not be eaten under any circumstances.

Chronic Symptoms: Portland cement may contain trace amounts (<0.1%) of free crystalline silica. 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

<table>
<thead>
<tr>
<th>Substance</th>
<th>LC50 Fish</th>
<th>Speciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium hydroxide (1305-62-0)</td>
<td>50.6 mg/l</td>
<td></td>
</tr>
<tr>
<td>Calcium oxide (1305-78-8)</td>
<td>1070 mg/l</td>
<td>Exposure time: 96 h - Species: Cyprinus carpio [static]</td>
</tr>
</tbody>
</table>

12.2. Persistence and Degradability

<table>
<thead>
<tr>
<th>Substance</th>
<th>Persistence and Degradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portland Cement (68475-76-3)</td>
<td>Not established.</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative Potential

<table>
<thead>
<tr>
<th>Substance</th>
<th>Bioaccumulative Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portland Cement (68475-76-3)</td>
<td>Not established.</td>
</tr>
<tr>
<td>Calcium hydroxide (1305-62-0)</td>
<td>(no bioaccumulation)</td>
</tr>
<tr>
<td>Calcium oxide (1305-78-8)</td>
<td>(no bioaccumulation)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Substance</th>
<th>SARA Section 311/312 Hazard Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portland Cement (68475-76-3)</td>
<td>Immediate (acute) health hazard</td>
</tr>
<tr>
<td></td>
<td>Delayed (chronic) health hazard</td>
</tr>
<tr>
<td>Cement, portland, chemicals (65997-15-1)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>Limestone (1317-65-3)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>Calcium hydroxide (1305-62-0)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>Calcium oxide (1305-78-8)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>Magnesium oxide (MgO) (1309-48-4)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
</tbody>
</table>

15.2 US State Regulations

<table>
<thead>
<tr>
<th>Substance</th>
<th>U.S. - States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cement, portland, chemicals (65997-15-1)</td>
<td>Massachusetts - Right To Know List</td>
</tr>
<tr>
<td></td>
<td>New Jersey - Right to Know Hazardous Substance List</td>
</tr>
<tr>
<td></td>
<td>Pennsylvania - RTK (Right to Know) List</td>
</tr>
<tr>
<td>Gypsum (CaSO4).2H2O (13397-24-5)</td>
<td>New Jersey - Right to Know Hazardous Substance List</td>
</tr>
<tr>
<td></td>
<td>Pennsylvania - RTK (Right to Know) List</td>
</tr>
</tbody>
</table>
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Limestone (1317-65-3)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Calcium hydroxide (1305-62-0)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Calcium oxide (1305-78-8)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Magnesium oxide (MgO) (1309-48-4)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

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. Portland cement should only be used by knowledgeable persons. Inexperienced product users must obtain proper training before using this product. A key to using the product safely requires the user to recognize that Portland cement chemically reacts with water, and that some of the intermediate products of this reaction (that is, those present while a Portland cement product is “setting”) pose a far more severe hazard than does Portland cement itself.

GHS Full Text Phrases:

<table>
<thead>
<tr>
<th>Aquatic Acute 3</th>
<th>Hazardous to the aquatic environment - Acute Hazard Category 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Dam. 1</td>
<td>Serious eye damage/eye irritation Category 1</td>
</tr>
<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>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
<tr>
<td>H402</td>
<td>Harmful to aquatic life</td>
</tr>
</tbody>
</table>

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)

04/17/2015 EN (English US) 7/7