Concrete - ready mix

Section 1. Identification

Product identifier: Concrete - ready mix
Other means of identification: Concrete (premixed), wet unhardened concrete, grout (fine – coarse)
Chemical name: Calcium compounds, calcium silicate compounds, and other calcium compounds containing iron and aluminum make up the majority of this product.
Relevant Uses: Building materials, a structural component in construction.
Manufacturers Name: CEMEX
Address: 10100 Katy Freeway, Suite 300
Houston, TX 77043
T Customer Care 1-800-99-CEMEX
Emergency telephone number: CHEMTREC: 1-800-424-9300

Section 2. Hazards Identification

OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Category Classification(s): SKIN CORROSION/IRRITATION - Category 1
EYE DAMAGE - Category 1
SKIN SENSITIZATION - Category 1
CARCINOGENICITY/INHALATION - Category 1
SINGLE TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3
SINGLE TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

GHS label elements:
Hazard pictograms:

Signal word: Danger
Hazard statements:
Causes severe skin burns and eye damage
May cause an allergic skin reaction
Causes serious eye damage
May cause respiratory irritation
May cause cancer (Dermal, Inhalation)
May cause damage to organs (eye, lung/respiratory system, Skin) through prolonged or repeated exposure (Dermal, Inhalation)

Precautionary Statements:
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Safety Data Sheet

Do not breathe dust, spray, mist, fume
Avoid breathing dust, spray, mist, fume
Wash clothing, hands, forearms and face thoroughly after handling
Use only outdoors or in a well-ventilated area
Contaminated work clothing must not be allowed out of the workplace
Wear eye protection, protective clothing, protective gloves
If swallowed: rinse mouth. Do NOT induce vomiting
If on skin: Wash with plenty of soap and water
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
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
If exposed or concerned: Get medical advice/attention
Immediately call a POISON CENTER
Call a poison center if you feel unwell
Get medical advice/attention if you feel unwell
Specific treatment (see Section 4 on this label)
If skin irritation or rash occurs: Get medical advice/attention
Take off contaminated clothing and wash it before reuse
Wash contaminated clothing before reuse
Store in a well-ventilated place. Keep container tightly closed
Store locked up
Dispose of contents/container to comply with local/regional/national regulations

Other Hazards: Trace amounts of naturally occurring chemicals might be detected during chemical analysis. Trace constituents may include insoluble residue, some of which may be free Quartz (crystalline silica), calcium oxide (Also known as lime or quick lime), magnesium oxide, potassium sulfate, sodium sulfate, chromium compounds, and nickel compounds.

Section 3. Composition / Information on Ingredients

Substance/mixture: Concrete - ready mix - mixture
Chemical name: Calcium compounds; calcium silicates and calcium oxides make up the majority of this product – calcium compounds can contain small amounts or iron and aluminum.

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>% Content</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portland Cement</td>
<td>1 - 30</td>
<td>65997-15-1</td>
</tr>
<tr>
<td>Aggregates (Limestone/Quartz/Granite/Gravel/Basalts)</td>
<td>0 - 80</td>
<td>NA</td>
</tr>
<tr>
<td>Calcium Oxide</td>
<td>&lt;=20.85</td>
<td>1305-78-8</td>
</tr>
<tr>
<td>Amorphous Silica</td>
<td>&lt;=6.55</td>
<td>61790-53-2</td>
</tr>
<tr>
<td>Quartz (crystalline silica)</td>
<td>0 - 1.8</td>
<td>14808-60-7</td>
</tr>
<tr>
<td>Hexavalent chromium*</td>
<td>*</td>
<td>18450-29-9</td>
</tr>
</tbody>
</table>

Fly Ash, containing the hazardous ingredients Calcium Oxide and Amorphous Silica listed above, is present as 0 - 35% of the product.

Slag, containing hazardous ingredients Calcium Oxide, Amorphous Silica, and Quartz (crystalline silica) listed above, is present at 0 - 50% of the product.

Any concentration shown as a range is to protect confidentiality or is due to batch variation. Chemical admixtures may be present in ranges of less than 1%. Individual composition of hazardous constituents may vary between types/different mixed designs of ready mix concrete.

*Hexavalent chromium is included due to dermal sensitivity associated with the component.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.
Description of necessary first aid measures:

**General:** Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

**Eye contact:** Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 15 minutes. Chemical burns must be treated promptly by a physician.

**Inhalation:** Seek medical help if coughing or other symptoms persist. Inhalation of large amounts of Concrete - ready mix requires immediate medical attention. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If the individual is not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

**Skin contact:** Get medical attention immediately. Immediately wash thoroughly with lukewarm, gently flowing water and non-abrasive pH neutral soap. Seek medical attention for rashes, burns, irritation, dermatitis and prolonged unprotected exposures to wet Concrete - ready mix. Concrete - ready mix mixtures or liquids from wet Concrete - ready mix. Burns should be treated as caustic burns. Heavy exposure to dried Concrete - ready mix dust caused by cutting and grinding, wet concrete or associated water requires prompt attention. Quickly remove contaminated clothing, shoes, and leather goods such as watchbands and belts. Quickly and gently blot or brush away excess Concrete - ready mix.

**Ingestion:** Get medical attention immediately. Call a poison center or physician. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING unless directed to do so by medical personnel. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Have victim drink 60 to 240 mL (2 to 8 oz.) of water. Stop giving water if the exposed person feels sick as vomiting may be dangerous. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

Potential symptoms and effects from acute exposures (delayed or immediate):

**Eye contact:** Causes serious eye damage.

**Inhalation:** May cause respiratory irritation.

**Skin contact:** Causes severe burns. Discomfort or pain cannot be relied upon to alert a person to a serious injury. You may not feel pain or the severity of the burn until hours after the exposure. Chemical burns must be treated promptly by a physician. May cause an allergic skin reaction.

**Ingestion:** Not expected to be a significant route of entry. May cause burns to mouth, throat and stomach.

Potential symptoms and effects from over-exposures:

**Eye contact:** Adverse symptoms may include the following: pain, watering and redness

**Inhalation:** Adverse symptoms may include the following: respiratory tract irritation and coughing

**Skin contact:** Adverse symptoms may include the following: pain or irritation, redness and blistering may occur, skin burns, ulceration and necrosis may occur

**Ingestion:** Adverse symptoms may include the following: stomach pains
Recommendations for immediate medical attention / treatment:

If large quantities have been ingested or inhaled:
Seek medical attention and contact poison treatment specialist immediately.

Notes to physician:
Treat symptomatically.

Protection of first-aiders:
No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Section 5. Fire-fighting Measures

Extinguishing media

Suitable extinguishing media: Non-flammable. Use an extinguishing agent suitable for the surrounding fire.

Specific hazards arising from the chemical: No specific fire or explosion hazard.

Hazardous thermal decomposition products: Decomposition products may include the following materials: carbon dioxide, carbon monoxide, sulfur oxides and metal oxide/oxides products:

Special protective actions for firefighters: Evacuate area. Fight fire with normal precautions from a reasonable distance. Move containers from fire area if this can be done without risk.

Special protective equipment for fire-fighters: Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters’ protective clothing will provide adequate protection.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

No action shall be taken involving any personal risk or without suitable training. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. For personal protective clothing requirements, please see Section 8.

For non-emergency personnel:
Personnel involved with the handling of wet unhardened concrete should take steps to avoid contact with the eyes and skin, through the use of gloves and suitable clothing as described in Section 8. Silica-containing respirable dust particles may be generated by crushing, cutting, grinding, or drilling hardened concrete or concrete products, and should always be avoided. Follow protective controls defined in Section 8 when handling these products. When cutting, grinding, crushing or drilling hardened concrete, use local exhaust or general dilution ventilation or other suppression methods to maintain dust levels below exposure limits.

For emergency responders:
For personal protective clothing and equipment requirements, please see Section 8.

Environmental precautions:
Wet unhardened concrete should be Salvaged or allowed to harden and disposed. Do not wash concrete down sewage and drainage systems or into bodies of water (e.g. lakes, streams, wetlands, etc.).

Methods and materials for containment and cleaning up

Small and large spills:
Place spilled material into a contained area and allow wet unhardened concrete to harden and dispose in a landfill as common solid waste. Follow applicable Federal, State, and local regulations for disposal. Uncontaminated ready mixed concrete is neither a listed nor a characteristic hazardous waste under designations by the USEPA or USDOT. USDOT Class: Uncontaminated ready mixed
concrete does not meet any hazardous material class definition found in Title 49 Code of Federal Regulations Part 173.

Section 7. Handling and Storage

Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure by obtaining and following special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe dust. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate.

Advice on general occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking.

Conditions for safe storage: Store and handle in accordance with all current regulations and standards. Keep separated from incompatible substances.

Section 8. Exposure Controls / Personal Protection

Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ACGIH TLV (United States, 3/2012)</td>
</tr>
<tr>
<td></td>
<td>TWA: 1 mg/m³ 8 hours. Form: Respirable</td>
</tr>
<tr>
<td></td>
<td>NIOSH REL (United States, 6/2009).</td>
</tr>
<tr>
<td>Portland Cement Clinker</td>
<td>TWA: 5 mg/m³ 10 hours. Form: Respirable</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL (United States, 6/2010).</td>
</tr>
<tr>
<td></td>
<td>TWA: 5 mg/m³ 8 hours. Form: Respirable</td>
</tr>
<tr>
<td></td>
<td>TWA: 10 mg/m³ 10 hours. Form: Total</td>
</tr>
<tr>
<td></td>
<td>TWA: 10 mg/m³ 8 hours. Form: Total Dust</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL Z-3 (United States, 9/2005).</td>
</tr>
<tr>
<td>Quartz (crystalline silica)</td>
<td>TWA: 10mg/m³ divided by %SiO₂ + 2: Respirable</td>
</tr>
<tr>
<td></td>
<td>TWA: 30mg/m³ divided by %SiO₂ + 2: Total</td>
</tr>
<tr>
<td>Limestone</td>
<td>ACGIH TLV (United States, 3/2012).</td>
</tr>
<tr>
<td></td>
<td>TWA: 10 mg/m³ 8 hours. Form: Total</td>
</tr>
<tr>
<td></td>
<td>NIOSH REL (United States, 6/2009).</td>
</tr>
<tr>
<td></td>
<td>TWA: 5 mg/m³ 10 hours. Form: Respirable</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL (United States, 6/2010).</td>
</tr>
<tr>
<td></td>
<td>TWA: 5 mg/m³ 8 hours. Form: Respirable</td>
</tr>
<tr>
<td></td>
<td>TWA: 15 mg/m³ 8 hours. Form: Total</td>
</tr>
<tr>
<td>Gypsum</td>
<td>ACGIH TLV (United States, 3/2012).</td>
</tr>
<tr>
<td></td>
<td>TWA: 10 mg/m³ 8 hours. Form: Respirable</td>
</tr>
</tbody>
</table>
## Controls

**Appropriate engineering controls:** Use only with adequate ventilation. If user operations generate dust, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Environmental exposure controls:** Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

## Hygiene

**Wash**
Clean water should always be readily available for skin and (emergency) eye washing. Periodically wash areas contacted by Concrete - ready mix with a pH neutral soap and clean, uncontaminated water. If clothing becomes saturated with Concrete - ready mix, garments should be removed and replaced with clean, dry clothing.

Remove protective equipment and saturated clothing before entering eating areas.

## PPE

**Eye/face protection:** To prevent eye contact, wear safety glasses with side shields, safety goggles or face shields when handling dust or wet Concrete - ready mix. Wearing contact lenses when working with Concrete - ready mix is not recommended.

**Hand protection:** Use impervious, waterproof, and alkali-resistant gloves. Do not rely on barrier creams in place of impervious gloves. Do not get Concrete - ready mix inside gloves. Recommended material: Nitrile®

**Body protection:** Use impervious, waterproof, abrasion and alkali-resistant boots and protective long-sleeved and long- legged clothing to protect the skin from contact with wet Concrete - ready mix. To reduce foot and ankle exposure, wear impervious boots that are high enough to prevent

---

<table>
<thead>
<tr>
<th>Calcium Oxide</th>
<th>Calcium Oxide</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH TLV (United States, 3/2012)</td>
<td>TWA: 2 mg/m³ 8 hours. Form: Respirable</td>
</tr>
<tr>
<td>NIOSH REL (United States, 6/2009)</td>
<td>TWA 2 mg/m³ 8 hours. Form: Respirable</td>
</tr>
<tr>
<td>OSHA PEL Z-1 (United States, 2/2006)</td>
<td>TWA: 5 mg/m³ 8 hours. Form: Respirable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Amorphous Silica</th>
<th>Amorphous Silica</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH TLV (United States, 3/2012)</td>
<td>Not Established</td>
</tr>
<tr>
<td>NIOSH REL (United States, 6/2009)</td>
<td>6 mg/m³ TWA; Appendix C - Supplementary Exposure Limits (Mineral Dusts).</td>
</tr>
<tr>
<td>OSHA PEL Z-1 (United States, 2/2006)</td>
<td>20 mppcf, 80 mg/m³/3%SiO₂ TWA (PEL listed under Silica, Amorphous, including natural diatomaceous earth)</td>
</tr>
<tr>
<td>(3) See Table Z-3.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Particulates Not Otherwise Regulated (Total Dust)</th>
<th>Particulates Not Otherwise Regulated (Total Dust)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH TLV (United States, 3/2012)</td>
<td>TWA: 3 mg/m³ 8 hours. Form: Respirable</td>
</tr>
<tr>
<td>OSHA PEL (United States, 6/2010).</td>
<td>TWA: 10 mg/m³ 8 hours. Form: Total dust</td>
</tr>
<tr>
<td>TWA 5 mg/m³ 8 hours. Form: Total dust</td>
<td>TWA: 5 mg/m³ 8 hours. Form: Respirable</td>
</tr>
<tr>
<td></td>
<td>TWA: 10 mg/m³ 8 hours. Form: Total dust</td>
</tr>
</tbody>
</table>

---

### Particulates Not Otherwise Regulated (Total Dust)

- **NIOSH REL (United States, 6/2009)**: TWA 5 mg/m³ 8 hours. Form: Respirable
- **OSHA PEL Z-1 (United States, 2/2006)**: TWA 5 mg/m³ 8 hours. Form: Respirable
- **OSHA PEL (United States, 6/2010)**: TWA 5 mg/m³ 8 hours. Form: Respirable
Concrete - ready mix from getting inside them. Do not get Concrete - ready mix inside boots, shoes, or gloves. Remove clothing and protective equipment that becomes saturated with Concrete - ready mix and immediately wash exposed areas of the body.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved. Footwear and other gear to protect the skin should be approved by a specialist before handling this product.

Respiratory protection: Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. (See OSHA Respiratory Protection Standard 29 CFR 1910.134)

### Section 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical State:</th>
<th>Suspended Solid [paste].</th>
<th>Lower and upper explosive (flammable) limits:</th>
<th>Not applicable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>Gray or white.</td>
<td>Vapor pressure:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Odor:</td>
<td>Odorless.</td>
<td>Vapor density:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Odor threshold:</td>
<td>Not available.</td>
<td>Relative density:</td>
<td>2.2 to 2.6</td>
</tr>
<tr>
<td>pH (in water):</td>
<td>12 - 13</td>
<td>Solubility:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Melting point:</td>
<td>Not available.</td>
<td>Solubility in water:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Boiling point:</td>
<td>&gt;1000°C (&gt;1832°F)</td>
<td>Partition coefficient: n-octanol/water:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Burning time:</td>
<td>Not available.</td>
<td>Decomposition temperature:</td>
<td>Not available.</td>
</tr>
<tr>
<td>Burning rate:</td>
<td>Not available.</td>
<td>SADT:</td>
<td>Not available.</td>
</tr>
<tr>
<td>Evaporation rate:</td>
<td>Not applicable.</td>
<td>Viscosity:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Flammability (solid, gas):</td>
<td>Not applicable.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Section 10. Stability and Reactivity

**Reactivity:** Reacts slowly with water forming hydrated compounds, releasing heat and producing a strong alkaline solution until reaction is substantially complete.

**Chemical stability:** The product is stable.

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

**Conditions to avoid:** No specific data.

**Incompatible materials:** Reactive or incompatible with the following materials: oxidizing materials, acids, aluminum and ammonium salt. Portland Concrete - ready mix is highly alkaline and will react with acids to produce a violent, heat-generating reaction. Toxic gases or vapors may be given off depending on the acid involved. Reacts with acids, aluminum metals and ammonium salts. Aluminum powder and other alkali and alkaline earth elements will react in wet mortar or concrete, liberating hydrogen gas. Limestone ignites on contact with fluorine and is incompatible with acids, alum, ammonium salts, and magnesium. Silica reacts violently with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride yielding possible fire and/or explosions. Silicates dissolve readily in hydrofluoric acid producing a corrosive gas — silicon tetrafluoride.

**Hazardous decomposition products:** Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Toxicological Effects

Acute toxicity: Ready Mix Concrete - ready mix LD50/LC50 = Not available

Irritation/Corrosion:
- Skin: May cause serious burns in the presence of moisture.
- Eyes: Causes serious eye damage. May cause burns in the presence of moisture.
- Respiratory: May cause respiratory tract irritation.

Sensitization: May cause sensitization due to the potential presence of trace amounts of hexavalent chromium.

Mutagenicity: Not classified.

Reproductive toxicity: Not classified.

Teratogenicity: Not classified.

Aspiration hazard: Not classified.

Carcinogenicity Classification:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>OSHA</th>
<th>IARC</th>
<th>ACGIH</th>
<th>NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portland Cement Clinker</td>
<td>-</td>
<td>-</td>
<td>A4</td>
<td>-</td>
</tr>
<tr>
<td>Quartz (crystalline silica)</td>
<td>-</td>
<td>1</td>
<td>A2</td>
<td>Known to be a human carcinogen.</td>
</tr>
</tbody>
</table>

Specific target organ toxicity (single exposure):

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Category</th>
<th>Route of Exposure</th>
<th>Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (crystalline silica)</td>
<td>Category 3</td>
<td>Inhalation</td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>Calcium Oxide</td>
<td>Category 3</td>
<td>Inhalation and skin contact</td>
<td>Eyes, skin, respiratory system</td>
</tr>
<tr>
<td>Amorphous Silica</td>
<td>Category 3</td>
<td>Inhalation</td>
<td>Respiratory tract and kidneys</td>
</tr>
</tbody>
</table>

Specific target organ toxicity (repeated exposure):

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Category</th>
<th>Route of Exposure</th>
<th>Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (crystalline silica)</td>
<td>Category 2</td>
<td>Inhalation</td>
<td>Respiratory tract and kidneys</td>
</tr>
<tr>
<td>Amorphous Silica</td>
<td>Category 2</td>
<td>Inhalation</td>
<td>Respiratory tract and kidneys</td>
</tr>
</tbody>
</table>

Routes of exposure - Dermal contact, Eye contact, Inhalation, and Ingestion.

Potential acute health effects:
- Eye contact: Causes serious eye damage.
- Inhalation: May cause respiratory irritation.
- Skin contact: Causes severe burns. May cause an allergic skin reaction.
- Ingestion: May cause burns to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics:
- Eye contact: Adverse symptoms may include the following: pain, watering, redness
- Inhalation: Adverse symptoms may include the following: respiratory tract irritation, coughing
- Skin contact: Adverse symptoms may include the following: pain or irritation, redness, blistering may occur, skin burns, ulcerations and necrosis may occur
- Ingestion: Adverse symptoms may include the following: stomach pains

Delayed and immediate effects and also chronic:
- Short term exposure
- Potential immediate effects: No known significant effects or critical hazards.
Safety Data Sheet

Effects from short and long term exposure:

Potential delayed effects: No known significant effects or critical hazards.

Long term exposure
Potential immediate effects: No known significant effects or critical hazards.
Potential delayed effects: No known significant effects or critical hazards.

Potential chronic health effects:

General: Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. If sensitized to hexavalent chromium, a severe allergic dermal reaction may occur when subsequently exposed to very low levels.

Carcinogenicity: Quartz (crystalline silica) is considered a hazard by inhalation. IARC has classified Quartz (crystalline silica) as a Group 1 substance, carcinogenic to humans. This classification is based on the findings of laboratory animal studies (inhalation and implantation) and epidemiology studies that were considered sufficient for carcinogenicity. Excessive exposure to Quartz (crystalline silica) can cause silicosis, a non-cancerous lung disease.

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:

There are no data available - acute toxicity estimates.

Section 12. Ecological

Toxicity

Persistence and degradability: There are no data available.

Bioaccumulation potential: There are no data available.

Mobility in soil: Soil/water partition coefficient (Koc): Not available.

Other adverse effects: No known significant effects or critical hazards.

Ecotoxicity: No recognized unusual toxicity to plants or animals

Section 13. Disposal Considerations

Disposal methods:
Salvage spilled Concrete - ready mix material where possible. Uncontaminated Concrete - ready mix material may be reused. Dispose of waste material in accordance with local, state and federal laws and regulations.

Section 14. Transport Information

Special precautions for user: Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:

<table>
<thead>
<tr>
<th>Transport Parameters</th>
<th>DOT Classification</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN Number</td>
<td>Not Regulated</td>
<td>Not Regulated</td>
<td>Not Regulated</td>
</tr>
</tbody>
</table>
### Safety Data Sheet

#### Section 15. Regulatory Information

**Status under USDOL-OSHA Hazard Communication Rule, 29 CFR 1910.1200**
This product is considered a “hazardous chemical” under this regulation, and should be part of any hazard communication program.

**Status under CERCLA/SUPERFUND 40 CFR 117 and 302**
Not listed.

**Hazard Category under SARA (Title III), Sections 311 and 312**
This product qualifies as a “hazardous substance” with delayed health effects.

**Status under SARA (Title III), Section 313**
This product does not contain Emergency Planning and Community Right to Know (EPCRA*) Section 313 chemicals in excess of the applicable de minimis concentration specified in EPCRA Section 313 Section 372.38(a). Trace amounts of naturally occurring chemicals might be detected during chemical analysis.

**Status under TSCA (as of May 1997)**
The ingredients of this product are listed on the TSCA inventory or are exempt.

**Status under the Federal Hazardous Substances Act**
This product is a “hazardous substance” subject to statutes promulgated under the subject act.

**Status under California Proposition 65**
This product contains up to 0.05 percent of chemicals (trace elements) known to the State of California to cause cancer, birth defects or other reproductive harm. California law requires the manufacturer to give the above warning in the absence of definitive testing to prove that the defined risks do not exist.

**State Right to Know:**
Portland Cement (65997-15-1)
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Washington - Permissible Exposure Limits - TWAs

Quartz (crystalline silica) (14808-60-7)
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Washington - Permissible Exposure Limits - TWAs

Gypsum (7778-18-9)
U.S. - New Jersey - Right to Know Hazardous Substance List

Limestone (1317-65-3)
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Washington - Permissible Exposure Limits - TWAs

### Section 16. Other Information

**Approval or Revision History**
Date of issue (mm/dd/yyyy): July 1998
Revision: April 2011 (Michael Tilton)
Revision: May 2015 - Revised Section(s) per HCS-GHS
Revision: April 2017 – related to address
Safety Data Sheet

Notice to reader

While the information provided in this safety data sheet is believed to provide a useful summary of the hazards of Portland Concrete - ready mix as it is commonly used, the sheet cannot anticipate and provide all of the information that might be needed in every situation. Inexperienced product users should obtain proper training before using this product. In particular, the data furnished in this sheet do not address hazards that may be posed by other materials mixed with Portland Concrete - ready mix to produce Portland Concrete - ready mix products. Users should review other relevant material safety data sheets before working with this Concrete - ready mix or working on Concrete - ready mix products, for example, Concrete - ready mix concrete.

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY CEMEX, Inc. except that the product shall conform to contracted specifications. The information provided herein was believed by CEMEX to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information to comply with all laws and procedures applicable to the safe handling and use of product and to determine the suitability of the product for its intended use. Buyer’s exclusive remedy shall be for damages and no claim of any kind, whether as to product delivered or for non-delivery of product, and whether based on contract, breach of warranty, negligence, or otherwise shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer’s claim is based on contract, breach of warranty, negligence or otherwise. In particular, the data furnished in this sheet do not address hazards that may be posed by other materials mixed with Concrete - ready mix to produce Concrete - ready mix products. Users should review other relevant safety data sheets before working with Concrete - ready mix or working on Concrete - ready mix products, for example, Concrete - ready mix concrete.

Abbreviations

ACGIH — American Conference of Governmental Industrial Hygienists
CAS — Chemical Abstract Service
CERCLA — Comprehensive Emergency Response and Comprehensive Liability Act
CFR — Code of Federal Regulations
DOT — Department of Transportation
GHS — Globally Harmonized System
HEPA — High Efficiency Particulate Air
IATA — International Air Transport Association
IARC — International Agency for Research on Cancer
IMDG — International Maritime Dangerous Goods
NIOSH — National Institute of Occupational Safety and Health
NOEC — No Observed Effect Concentration
NTP — National Toxicology Program
OSHA — Occupational Safety and Health Administration
PEL — Permissible Exposure Limit
REL — Recommended Exposure Limit
RQ — Reportable Quantity
SARA — Superfund Amendments and Reauthorization Act
SDS — Safety Data Sheet
TLV — Threshold Limit Value
TPQ — Threshold Planning Quantity
TSCA — Toxic Substances Control Act
TWA — Time-Weighted Average
UN — United Nations