Ready Mix Concrete
Safety Data Sheet
According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Date of Issue: 05/21/2018
Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: Ready Mix Concrete
Synonyms: Freshly Mixed Unhardened Concrete

1.2. Intended Use of the Product

Use of the Substance/Mixture: Ready Mix Concrete is used as a construction material.

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

Company
Ralph Clayton & Sons
PO Box 3015
Lakewood, NJ 08701
1-800-662-3044
www.claytonco.com

1.4. Emergency Telephone Number

Emergency Number: 1-800-662-3044 (8AM-5PM EST M-F - Ralph Clayton & Sons)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Skin Corr. 1C H314
Eye Dam. 1 H318
Skin Sens. 1 H317
Carc. 1A H350
STOT SE 3 H335
STOT RE 1 H372

Full text of hazard classes and H-statements: see section 16

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US): "GHS05 GHS07 GHS08"

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.
- H350 - May cause cancer (inhalation).
- H372 - Causes damage to organs (lungs) through prolonged or repeated exposure (inhalation).

Precautionary Statements (GHS-US):
- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P260 - Do not breathe dust.
- P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P271 - Use only outdoors or in a well-ventilated area.
- P272 - Contaminated work clothing must not be allowed out of the workplace.
- P280 - Wear protective gloves, protective clothing, and eye protection.
- 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.
Ready Mix Concrete
Safety Data Sheet
According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2.3. Other Hazards
Exposure may aggravate pre-existing eye, skin, or respiratory conditions. Clothing saturated with wet product can result in delayed, serious alkali skin burns. Portland cement pulls water away from the skin, resulting in dryness, dermatitis, and skin burns. Cement burns do not cause immediate pain or discomfort, do not rely on pain or discomfort as a signal of burns.

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>
</tr>
</thead>
<tbody>
<tr>
<td>Cement, portland, chemicals</td>
<td>(CAS-No.) 65997-15-1</td>
<td>&lt; 70</td>
</tr>
<tr>
<td>Water</td>
<td>(CAS-No.) 7732-18-5</td>
<td>&lt; 30</td>
</tr>
<tr>
<td>Slags, ferrous metal, blast furnace</td>
<td>(CAS-No.) 65996-69-2</td>
<td>&lt; 20</td>
</tr>
<tr>
<td>Ashes, residues</td>
<td>(CAS-No.) 68131-74-8</td>
<td>&lt; 20</td>
</tr>
<tr>
<td>Silica, amorphous</td>
<td>(CAS-No.) 7631-86-9</td>
<td>&lt; 20</td>
</tr>
<tr>
<td>Fumes, silica</td>
<td>(CAS-No.) 69012-64-2</td>
<td>&lt; 2</td>
</tr>
<tr>
<td>Quartz</td>
<td>(CAS-No.) 14808-60-7</td>
<td>&gt; 1</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 30 minutes. Obtain medical attention if irritation/rash develops or persists. Wash contaminated clothing before reuse.

First-aid Measures After Eye Contact: Immediately rinse with water for at least 30 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

Symptoms/Injuries: Causes severe skin burns and eye damage. Skin sensitization. May cause respiratory irritation. May cause cancer (inhalation). Causes damage to organs (lungs) through prolonged or repeated exposure (inhalation).

Symptoms/Injuries After Inhalation: For particulates and dust: Irritation of the respiratory tract and the other mucous membranes. Dust may be harmful or cause irritation.

Symptoms/Injuries After Skin Contact: Causes severe skin burns. May cause an allergic skin reaction. Symptoms may be delayed. Cement may cause dry skin, discomfort, irritation, severe burns, and dermatitis. Exposure of sufficient duration to wet cement, or to dry cement on moist areas of the body, can cause serious, potentially irreversible damage to skin, eye, respiratory and digestive tracts due to chemical (caustic) burns, including third degree burns. A skin exposure may be hazardous even if there is no pain or discomfort. Cement is capable of causing dermatitis by irritation and allergy. Skin affected by dermatitis may include symptoms such as, redness, itching, rash, scaling, and cracking. Irritant dermatitis is caused by the physical properties of cement including alkalinity and abrasion. Allergic contact dermatitis is caused by sensitization to hexavalent chromium (chromate) present in cement. The reaction can range from a mild rash to severe skin ulcers. Persons already sensitized may react to the first contact with cement. Others may develop allergic dermatitis after years of repeated contact with cement.
Symptoms/Injuries After Eye Contact: Causes permanent damage to the cornea, iris, or conjunctiva. Airborne dust may cause immediate or delayed irritation or inflammation. Eye contact with large amounts of clinker dust, dry cement powder or with wet cement can cause moderate eye irritation, chemical burns and blindness. Eye exposures require immediate first aid and medical attention to prevent significant damage to the eye.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: For particulates and dust: May cause cancer by inhalation. Causes damage to organs (lungs) through prolonged or repeated exposure (inhalation). Dry sawing or grinding of concrete masonry products may result in the release of respirable crystalline quartz. Prolonged exposure to respirable crystalline quartz may cause delayed (chronic) lung injury (silicosis). Acute or rapidly developing silicosis may occur in a short period of time in heavy exposure. Silicosis is a form of disabling pulmonary fibrosis which can be progressive and may lead to death. Long term exposure to respirable crystalline silica results in a significant risk of developing silicosis and other non-malignant respiratory disease, lung cancer, kidney effects, and immune system effects.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed
If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media
Suitable Extinguishing Media: Water spray, fog, carbon dioxide (CO₂), alcohol-resistant foam, or dry chemical.

5.2. Special Hazards Arising From the Substance or Mixture
Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions. Wet concrete 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: Use water spray or fog for cooling exposed containers. Do not breathe fumes from fires or vapors from decomposition.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂). Nitrogen oxides. Metal oxides. Silica compounds. Crystalline silica exists in several forms, the most common of which is quartz. If crystalline silica (quartz) is heated to more than 870°C, it can change to a form of crystalline silica known as trydimit, and if crystalline silica (quartz) is heated to more than 1470°C, it can change to a form of crystalline silica known as cristobalite. The OSHA PEL for crystalline silica as trydimit and cristobalite is one-half of the OSHA PEL for crystalline silica (quartz).

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures
General Measures: Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not handle until all safety precautions have been read and understood. Avoid generating dust.

6.1.1. For Non-Emergency Personnel
Protective Equipment: Use appropriate personal protective equipment (PPE).

6.1.2. For Emergency Personnel
Protective Equipment: Equip cleanup crew with proper protection.
Emergency Procedures: Ventilate area. 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 Materials for Containment and Cleaning Up
For Containment: Contain any spills with dikes or absorbents.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. For wet cement: Remove product by scooping or shoveling into suitable containers for recycling or disposal, utilize appropriate PPE (see Section 8). For dry cement, or if it becomes hardened: Avoid generation of dust. Vacuum cleanup is preferred, If sweeping is required use a dust suppressant, do not dry sweep. Utilize appropriate PPE (see Section 8). Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.
6.4. Reference to Other Sections
See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling
Additional Hazards When Processed: Wet cement is corrosive. Take appropriate precautions to prevent unnecessary contact. Cutting, crushing or grinding cement clinker, hardened cement, concrete or other crystalline silica-bearing materials will release respirable crystalline silica. Use all appropriate measures of dust control or suppression, and Personal Protective Equipment (PPE) described in Section 8 below.

Precautions for Safe Handling: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Avoid creating or spreading dust. Use appropriate personal protective equipment (PPE).

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for Safe Storage, Including Any Incompatibilities
Technical Measures: Comply with applicable regulations. Avoid creating or spreading dust.
Storage Conditions: Keep container closed when not in use. Store in a dry, cool and well-ventilated place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store locked up/in a secure area.
Incompatible Materials: Strong acids, strong bases, strong oxidizers. Wet cement and cement clinker 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.

7.3. Specific End Use(s)
Ready Mix Concrete is used as a construction material.

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), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

<table>
<thead>
<tr>
<th>Substance</th>
<th>USA ACGIH</th>
<th>USA NIOSH</th>
<th>USA OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cement, portland, chemicals</td>
<td>ACGIH TWA (mg/m³)</td>
<td>NIOSH REL (mg/m³)</td>
<td>OSHA PEL (mg/m³)</td>
</tr>
<tr>
<td>USA ACGIH</td>
<td>1 mg/m³ (particulate matter containing no asbestos and &lt;1% crystalline silica, respirable particulate matter)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA NIOSH</td>
<td>Not Classifiable as a Human Carcinogen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA OSHA</td>
<td>10 mg/m³ (total dust)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 mg/m³ (respirable dust)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA IDLH</td>
<td>5000 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA OSHA</td>
<td>15 mg/m³ (total dust)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 mg/m³ (respirable fraction)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quartz (14808-60-7)</td>
<td>ACGIH TWA (mg/m³)</td>
<td>NIOSH REL (mg/m³)</td>
<td>OSHA PEL (mg/m³)</td>
</tr>
<tr>
<td>USA ACGIH</td>
<td>0.025 mg/m³ (respirable particulate matter)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA NIOSH</td>
<td>A2 - Suspected Human Carcinogen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA IDLH</td>
<td>0.05 mg/m³ (respirable dust)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA OSHA</td>
<td>50 mg/m³ (respirable dust)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA OSHA</td>
<td>50 µg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silica, amorphous (7631-86-9)</td>
<td>NIOSH REL (mg/m³)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA NIOSH</td>
<td>6 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA IDLH</td>
<td>3000 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA OSHA</td>
<td>6 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (mg/m³)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>20 mppcf (80mg/m³/%SiO₂)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
8.2. Exposure Controls
Appropriate Engineering Controls: Suitable eye/body wash equipment should be available in the vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Use local exhaust or general dilution ventilation or other suppression methods to maintain dust levels below exposure limits. Power equipment should be equipped with proper dust collection devices. If product needs to be altered, use wet processing techniques if possible to minimize generation of dust. Ensure all national/local regulations are observed.


Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear protective gloves.
Eye and Face Protection: Chemical safety goggles.
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. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

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: Liquid
Appearance: Gray, flowable material
Odor: No data available
Odor Threshold: No data available
pH: 9 - 13
Evaporation Rate: No data available
Melting Point: No data available
Freezing Point: No data available
Boiling Point: No data available
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
Solubility: Water: Insoluble
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: Hazardous reactions will not occur under normal conditions. Wet concrete 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 recommended handling and storage conditions (see section 7).

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

10.4. Conditions to Avoid: Incompatible materials. Avoid creating or spreading dust.
10.5. **Incompatible Materials:** Strong acids, strong bases, strong oxidizers. Wet cement and cement clinker 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.

10.6. **Hazardous Decomposition Products:** None expected under normal conditions of use.

**SECTION 11: TOXICOLOGICAL INFORMATION**

11.1. **Information on Toxicological Effects**

**Acute Toxicity:** Not classified

<table>
<thead>
<tr>
<th>Slags, ferrous metal, blast furnace (65996-69-2)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 Oral Rat</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td>LD50 Dermal Rat</td>
<td>&gt; 4000 mg/kg</td>
</tr>
<tr>
<td>LC50 Inhalation Rat</td>
<td>&gt; 230.1 mg/m³ (Exposure Time: 6 h; Species: Wistar)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quartz (14808-60-7)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 Oral Rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
<tr>
<td>LD50 Dermal Rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ashes, residues (68131-74-8)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 Oral Rat</td>
<td>&gt; 2000 mg/kg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Silica, amorphous (7631-86-9)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 Oral Rat</td>
<td>7900 mg/kg</td>
</tr>
<tr>
<td>LD50 Dermal Rabbit</td>
<td>&gt; 2000 mg/kg</td>
</tr>
</tbody>
</table>

**Skin Corrosion/Irritation:** Causes severe skin burns and eye damage.  
**pH:** 9 - 13

**Serious Eye Damage/Irritation:** Causes serious eye damage.  
**pH:** 9 - 13

**Respiratory or Skin Sensitization:** May cause an allergic skin reaction.

**Germ Cell Mutagenicity:** Not classified

**Carcinogenicity:** May cause cancer (inhalation).

<table>
<thead>
<tr>
<th>Quartz (14808-60-7)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC group</td>
<td>1</td>
</tr>
<tr>
<td>National Toxicology Program (NTP) Status</td>
<td>Known Human Carcinogens.</td>
</tr>
<tr>
<td>OSHA Hazard Communication Carcinogen List</td>
<td>In OSHA Hazard Communication Carcinogen list.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Silica, amorphous (7631-86-9)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC group</td>
<td>3</td>
</tr>
</tbody>
</table>

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** May cause respiratory irritation.

**Specific Target Organ Toxicity (Repeated Exposure):** Causes damage to organs (lungs) through prolonged or repeated exposure (inhalation).

**Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** Irritation of the respiratory tract and the other mucous membranes. Dust may be harmful or cause irritation.

**Symptoms/Injuries After Skin Contact:** Causes severe skin burns. May cause an allergic skin reaction. Symptoms may be delayed. Cement may cause dry skin, discomfort, irritation, severe burns, and dermatitis. Exposure of sufficient duration to wet cement, or to dry cement on moist areas of the body, can cause serious, potentially irreversible damage to skin, eye, respiratory and digestive tracts due to chemical (caustic) burns, including third degree burns. A skin exposure may be hazardous even if there is no pain or discomfort. Cement is capable of causing dermatitis by irritation and allergy. Skin affected by dermatitis may include symptoms such as, redness, itching, rash, scaling, and cracking. Irritant dermatitis is caused by the physical properties of cement including alkalinity and abrasion. Allergic contact dermatitis is caused by sensitization to hexavalent chromium (chromate) present in cement. The reaction can range from a mild rash to severe skin ulcers. Persons already sensitized may react to the first contact with cement. Others may develop allergic dermatitis after years of repeated contact with cement.

**Symptoms/Injuries After Eye Contact:** Causes permanent damage to the cornea, iris, or conjunctiva. Airborne dust may cause immediate or delayed irritation or inflammation. Eye contact with large amounts of clinker dust, dry cement powder or with wet cement can cause moderate eye irritation, chemical burns and blindness. Eye exposures require immediate first aid and medical attention to prevent significant damage to the eye.

**Symptoms/Injuries After Ingestion:** Ingestion may cause adverse effects.
Ready Mix Concrete
Safety Data Sheet
According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Chronic Symptoms: For particulates and dust: May cause cancer by inhalation. Causes damage to organs (lungs) through prolonged or repeated exposure (inhalation). Dry sawing or grinding of concrete masonry products may result in the release of respirable crystalline quartz. Prolonged exposure to respirable crystalline quartz may cause delayed (chronic) lung injury (silicosis). Acute or rapidly developing silicosis may occur in a short period of time in heavy exposure. Silicosis is a form of disabling pulmonary fibrosis which can be progressive and may lead to death. Long term exposure to respirable crystalline silica results in a significant risk of developing silicosis and other non-malignant respiratory disease, lung cancer, kidney effects, and immune system effects.

SECTION 12: ECOLOGICAL INFORMATION
12.1. Toxicity
Ecology - General : Not classified.
Silica, amorphous (7631-86-9)
LC50 Fish 1 5000 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Daphnia 1 7600 mg/l (Exposure time: 48 h - Species: Ceriodaphnia dubia)

12.2. Persistence and Degradability
Ready Mix Concrete
Persistence and Degradability Not established.

12.3. Bioaccumulative Potential
Ready Mix Concrete
Bioaccumulative Potential Not established.
Silica, amorphous (7631-86-9)
BCF Fish 1 (no bioaccumulation expected)

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
Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, and international regulations.
Additional Information: Recycle the material as far as possible. Container may remain hazardous when empty. Continue to observe all precautions.
Ecology - Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION
The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

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
Ready Mix Concrete
SARA Section 311/312 Hazard Classes Health hazard - Skin corrosion or Irritation
Health hazard - Serious eye damage or eye irritation
Health hazard - Respiratory or skin sensitization
Health hazard - Carcinogenicity
Health hazard - Specific target organ toxicity (single or repeated exposure)

Cement, portland, chemicals (65997-15-1) Listed on the United States TSCA (Toxic Substances Control Act) inventory
Slags, ferrous metal, blast furnace (65996-69-2) Listed on the United States TSCA (Toxic Substances Control Act) inventory
Quartz (14808-60-7) Listed on the United States TSCA (Toxic Substances Control Act) inventory
Ashes, residues (68131-74-8) Listed on the United States TSCA (Toxic Substances Control Act) inventory

05/21/2018 EN [English US] 7/9
Ready Mix Concrete
Safety Data Sheet
According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**Water (7732-18-5)**
Listed on the United States TSCA (Toxic Substances Control Act) inventory

**Fumes, silica (69012-64-2)**
Listed on the United States TSCA (Toxic Substances Control Act) inventory

**Silica, amorphous (7631-86-9)**
Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. US State Regulations

<table>
<thead>
<tr>
<th><strong>Quartz (14808-60-7)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>U.S. - California - Proposition 65 - Carcinogens List</strong></td>
</tr>
<tr>
<td><strong>Cement, portland, chemicals (65997-15-1)</strong></td>
</tr>
<tr>
<td>RTK - U.S. - Massachusetts - Right To Know List</td>
</tr>
<tr>
<td>RTK - U.S. - New Jersey - Right to Know Hazardous Substance List</td>
</tr>
<tr>
<td>U.S. - New York - Occupational Exposure Limits - Mineral Dusts</td>
</tr>
<tr>
<td>U.S. - New York - Occupational Exposure Limits - TWAs</td>
</tr>
<tr>
<td>RTK - U.S. - Pennsylvania - RTK (Right to Know) List</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Quartz (14808-60-7)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RTK - U.S. - Massachusetts - Right To Know List</strong></td>
</tr>
<tr>
<td><strong>RTK - U.S. - New Jersey - Right to Know Hazardous Substance List</strong></td>
</tr>
<tr>
<td><strong>U.S. - New York - Special Health Hazards Substances List</strong></td>
</tr>
<tr>
<td><strong>U.S. - New York - Occupational Exposure Limits - Mineral Dusts</strong></td>
</tr>
<tr>
<td><strong>U.S. - New York - Occupational Exposure Limits - TWAs</strong></td>
</tr>
<tr>
<td><strong>RTK - U.S. - Pennsylvania - RTK (Right to Know) List</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Fumes, silica (69012-64-2)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RTK - U.S. - Massachusetts - Right To Know List</strong></td>
</tr>
<tr>
<td><strong>RTK - U.S. - New Jersey - Right to Know Hazardous Substance List</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Silica, amorphous (7631-86-9)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RTK - U.S. - Massachusetts - Right To Know List</strong></td>
</tr>
<tr>
<td><strong>RTK - U.S. - Pennsylvania - RTK (Right to Know) List</strong></td>
</tr>
</tbody>
</table>

### SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Date of Preparation or Latest Revision**: 05/21/2018

**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**:

| **Carc. 1A** | Carcinogenicity Category 1A |
| **Eye Dam. 1** | Serious eye damage/eye irritation Category 1 |
| **Skin Corr. 1C** | Skin corrosion/irritation Category 1C |
| **Skin Sens. 1** | Skin sensitization, Category 1 |
| **STOT RE 1** | Specific target organ toxicity (repeated exposure) Category 1 |
| **STOT SE 3** | Specific target organ toxicity (single exposure) Category 3 |
| **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 |
| **H350** | May cause cancer |
| **H372** | Causes damage to organs through prolonged or repeated exposure |
The information and recommendations contained herein are based upon data believed to be up to date and correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. Ralph Clayton & Sons and all associated entities accept no responsibility and disclaim all liability for the use of any Ralph Clayton & Sons Safety Data Sheet for any Silica containing products or harmful effects that may be caused by purchase, resale, use or exposure to our silica containing material or products. Customers and users of products containing silica in any form must comply with all applicable health and safety laws, orders or regulations for its use and exposure and insure that they properly determine what laws, rules or regulations specifically apply to their industry wherever they should operate. In particular, they are under an obligation to carry out a risk assessment for any work places where silica containing products are present and to perform adequate risk management measures and procedures in accordance with any applicable law or regulation. They must also insure that they implement all necessary protective measures and engineering controls as required by all applicable laws, regulations and orders.

SDS US (GHS HazCom)