

### SECTION 1: IDENTIFICATION

#### 1.1. Product Identifier

**Product Name:** Ready Mix Concrete

**Synonyms:** Agileflow®, Agilia® Screed C, Agrifarge™ 20, 25, 30, 32, Agrifarge™ Plus, Agrifarge™ RP, ArteviaColor®, Chronolia®, Colloidal Concrete, Colored Concrete, Concrete, Concrete Ready Mix, Duraload and Coreforce, DYNAMax, ECOPact, Extensia™, Fiber Reinforced Concrete, Flowable Fill, Freshly Mixed Concrete, Gunite, Hydromedia®, HYDROMEDIA™, Lafarge Ready Mix Concrete, Permeable Concrete, Polymer-Portland Cement Concrete, Portland Cement Concrete, RAPIDFORCE®, Ready Mix, Ready Mix Concrete, Ready Mix Grout, Ready Mix Stucco, Roller-Compacted Concrete, Shotcrete, Thermaflow™, The Artevia Collection®, UltraCurb™, UltraDrive™, UltraFlo-Fil™, UltraFooting™, UltraHorizontal™, UltraPatio™, UltraStamp™, UltraTilt™, UltraVertical™, Weathermix **Note:** This SDS covers many types of Concrete. Individual composition of hazardous constituents will vary between types of Concrete.

#### 1.2. Intended Use of the Product

Concrete is widely used as a structural component in construction applications.

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

##### Company

Holcim US

8700 West Bryn Mawr Avenue, Suite 300

Chicago, IL 60631

Information: (888) 646-5246 (9am to 5pm CST)

Email: [us-sds-inquiries@holcim.com](mailto:us-sds-inquiries@holcim.com)

Website: [holcim.us](http://holcim.us)

#### 1.4. Emergency Telephone Number

**Emergency Number** : ChemTel LLC

1-800-255-3924 (US and Canada)

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1. Classification of the Substance or Mixture

##### GHS-US/CA Classification

Skin Irrit. 2 H315

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/CA Labeling

##### Hazard Pictograms (GHS-US/CA)



##### Signal Word (GHS-US/CA)

: Danger

##### Hazard Statements (GHS-US/CA)

: H315 - Causes skin irritation.

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 (lung/respiratory system) through prolonged or

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### Precautionary Statements (GHS-US/CA)

repeated exposure (Inhalation).  
 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 should not be allowed out of the workplace.  
 P280 - Wear protective gloves, protective clothing, and eye protection.  
 P302+P352 - IF ON SKIN: Wash with plenty of water.  
 P304+P340 - IF INHALED: Remove person to fresh air and keep 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.  
 P308+P313 - If exposed or concerned: Get medical advice/attention.  
 P310 - Immediately call a POISON CENTER or doctor.  
 P314 - Get medical advice/attention if you feel unwell.  
 P321 - Specific treatment (see section 4 on this SDS).  
 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, and international regulations.

### 2.3. Other Hazards

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. Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

### 2.4. Unknown Acute Toxicity (GHS-US/CA)

No data available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	Synonyms	Product Identifier	% *	GHS Ingredient Classification
Quartz	Quartz (SiO <sub>2</sub> ) / Silica, crystalline, quartz / Crystalline silica, quartz / .alpha.-Quartz / Silica, crystalline, .alpha.-quartz / Crystalline silica in the form of quartz / Quartz, silica / Quartz (respirable fraction) / Silica dust / Silica, crystalline-.alpha.quartz / Silica, quartz / Silica, .alpha.-quartz / Silicon dioxide / Silica, crystalline / Quartz (crystalline silica) / Silica dust, crystalline / QUARTZ POWDER / Silica, crystalline (quartz)	(CAS-No.) 14808-60-7	0 – 90	Carc. 1A, H350 STOT SE 3, H335 STOT RE 1, H372
Limestone	Chalk / Limestone (A noncombustible solid characteristic of sedimentary rock. It consists primarily of calcium carbonate.) / Natural calcium carbonate / Marble / Calcium carbonate / Limestone (sedimentary rock) / Calcite / Limestone ground / Acetate, 4-methyl-2-propyl-2H-tetrahydropyran-4-yl / Ground limestone	(CAS-No.) 1317-65-3	25 – 65	Not classified
Cement, portland, chemicals	Portland cement / Silicate, portland cement / Cement (Portland) / Cement kiln dust / Cement Portland	(CAS-No.) 65997-15-1	10 – 30	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 3, H335
Calcium hydroxide	Calcium dihydroxide / Calcium hydroxide (Ca(OH) <sub>2</sub> ) / Hydrated lime / Lime, hydrated / Slaked lime	(CAS-No.) 1305-62-0	15 – 25	Skin Irrit. 2, H315

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				Eye Dam. 1, H318 STOT SE 3, H335
Ashes, residues	Ashes (residues) / Ceramic microspheres / Coal ash by-product / Furnace residues / Oil ash, by-product / Ashes / Ash / Ashes from fluidized bed combustion / Fly ash / Bottom ash / Coal fly ash / Ashes, residues (The residuum from the burning of a combination of carbonaceous materials. The following elements may be present as oxides: aluminum, calcium, iron, magnesium, nickel, phosphorus, potassium, silicon, sulfur, titanium, and vanadium.) / Coal ash / Ash coals Podmoskovny, Pechorsky, Kuznetsky, Donetsk, Ekibastuzsky, brand B1 of Babaevsky and Tyulgansky deposits / Ashes(residues),coal	(CAS-No.) 68131-74-8	< 20	Not classified
Calcium oxide	Lime / Quicklime / Quicklime (CaO) / Calcium oxide (CaO) / Lime (calcium oxide)	(CAS-No.) 1305-78-8	< 5	Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 3, H402 Aquatic Chronic 3, H412
Magnesium oxide (MgO)	Calcined magnesite / Magnesium oxide / Magnesia	(CAS-No.) 1309-48-4	< 4	Not classified
Gypsum (Ca(SO4).2H2O)	Gypsum	(CAS-No.) 13397-24-5	< 2	Not classified

Full text of H-phrases: see section 16

\*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of 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).

**Inhalation:** When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

**Skin Contact:** Remove contaminated clothing. Immediately drench affected area with water for at least 15 minutes. If exposed or concerned: Get medical advice/attention. Obtain medical attention if irritation/rash develops or persists.

**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.

**Ingestion:** Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

### 4.2. Most Important Symptoms and Effects Both Acute and Delayed

**General:** May cause respiratory irritation. Causes damage to organs (lung/respiratory system) through prolonged or repeated exposure (Inhalation). May cause cancer by inhalation. Skin sensitization. Causes skin irritation. Causes serious eye damage.

**Inhalation:** Irritation of the respiratory tract and the other mucous membranes. Some studies show that exposure to respirable crystalline silica (without silicosis) or that the disease silicosis may be associated with the increased incidence of several autoimmune disorders such as scleroderma (thickening of the skin), systemic lupus erythematosus, rheumatoid arthritis and diseases affecting the kidneys. Silicosis increases the risk of tuberculosis. Some studies show an increased incidence of chronic kidney disease and end-stage renal disease in workers exposed to respirable crystalline silica.

**Skin Contact:** Redness, pain, swelling, itching, burning, dryness, and dermatitis. May cause an allergic skin reaction. May cause skin to become dry or cracked.

**Eye Contact:** Causes permanent damage to the cornea, iris, or conjunctiva. Concrete may cause immediate or delayed irritation or inflammation. Eye contact with wet concrete 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.

**Ingestion:** Ingestion may cause adverse effects.

**Chronic Symptoms:** 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.

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### 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, dry chemical, foam, carbon dioxide.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire. Use of heavy stream of water may spread fire.

### 5.2. Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Not flammable. Not considered flammable but may burn at high temperatures.

**Explosion Hazard:** Product is not explosive.

**Reactivity:** Hazardous reactions will not occur under normal conditions.

### 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.

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

**Hazardous Combustion Products:** Calcium oxides. Carbon oxides (CO, CO<sub>2</sub>). Oxides of magnesium. Silicon oxides.

### 5.4. Reference to Other Sections

Refer to Section 9 for flammability properties.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Do not handle until all safety precautions have been read and understood. Do not breathe dust. Do not get in eyes, on skin, or on clothing.

#### 6.1.1. For Non-Emergency Personnel

**Protective Equipment:** Use appropriate personal protective equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

#### 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 solid spills with appropriate barriers and prevent migration and entry into sewers or streams.

**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely. Recover the product by vacuuming, shoveling or sweeping. Vacuum clean-up is preferred. If sweeping is required use a dust suppressant. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

### 6.4. Reference to Other Sections

See Section 8, Exposure Controls and Personal Protection. 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:** Cutting, crushing, sanding or grinding of 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. Heavy material - proper lifting methods or equipment.

**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.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures.

### 7.2. Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Comply with applicable regulations.

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**Storage Conditions:** Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store locked up/in a secure area.

**Incompatible Materials:** 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.

**Storage Temperature:** Unlimited

### 7.3. Specific End Use(s)

Concrete is widely used as a structural component in construction 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), AIHA (WEEL), NIOSH (REL), OSHA (PEL), or Canadian provincial governments.

Quartz (14808-60-7)		
USA ACGIH	ACGIH OEL TWA	0.025 mg/m <sup>3</sup> (respirable particulate matter)
USA ACGIH	ACGIH chemical category	A2 - Suspected Human Carcinogen
USA OSHA	OSHA PEL (TWA) [1]	50 µg/m <sup>3</sup> (Respirable crystalline silica)
USA OSHA	OSHA PEL (TWA) [2]	(250)/(%SiO <sub>2</sub> +5) mppcf TWA (respirable fraction) (10)/(%SiO <sub>2</sub> +2) mg/m <sup>3</sup> TWA (respirable fraction) (For any operations or sectors for which the respirable crystalline silica standard, 1910.1053, is stayed or otherwise not in effect, See 20 CFR 1910.1000 TABLE Z-3)
USA NIOSH	NIOSH REL (TWA)	0.05 mg/m <sup>3</sup> (respirable dust)
USA IDLH	IDLH	50 mg/m <sup>3</sup> (respirable dust)
Alberta	OEL TWA	0.025 mg/m <sup>3</sup> (respirable particulate)
British Columbia	OEL TWA	0.025 mg/m <sup>3</sup> (respirable)
Manitoba	OEL TWA	0.025 mg/m <sup>3</sup> (respirable particulate matter)
New Brunswick	OEL TWA	0.1 mg/m <sup>3</sup> (respirable fraction)
Newfoundland & Labrador	OEL TWA	0.025 mg/m <sup>3</sup> (respirable particulate matter)
Nova Scotia	OEL TWA	0.025 mg/m <sup>3</sup> (respirable particulate matter)
Nunavut	OEL TWA	0.05 mg/m <sup>3</sup> (respirable fraction (Silica - crystalline))
Northwest Territories	OEL TWA	0.05 mg/m <sup>3</sup> (respirable fraction (Silica - crystalline))
Ontario	OEL TWA	0.1 mg/m <sup>3</sup> (designated substances regulation-respirable fraction (Silica, crystalline))
Prince Edward Island	OEL TWA	0.025 mg/m <sup>3</sup> (respirable particulate matter)
Québec	VEMP (OEL TWA)	0.1 mg/m <sup>3</sup> (respirable dust)
Saskatchewan	OEL TWA	0.05 mg/m <sup>3</sup> (respirable fraction (Silica - crystalline (Trydinite removed)))
Yukon	OEL TWA	300 particle/mL (Silica - Quartz, crystalline)
Limestone (1317-65-3)		
USA OSHA	OSHA PEL (TWA) [1]	15 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (respirable fraction)
USA NIOSH	NIOSH REL (TWA)	10 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (respirable dust)
Alberta	OEL TWA	10 mg/m <sup>3</sup>
British Columbia	OEL STEL	20 mg/m <sup>3</sup> (total)
British Columbia	OEL TWA	10 mg/m <sup>3</sup> (total dust) 3 mg/m <sup>3</sup> (respirable fraction)
New Brunswick	OEL TWA	10 mg/m <sup>3</sup> (particulate matter containing no Asbestos and <1% Crystalline silica)
Nunavut	OEL STEL	20 mg/m <sup>3</sup>

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<b>Nunavut</b>	OEL TWA	10 mg/m <sup>3</sup>
<b>Northwest Territories</b>	OEL STEL	20 mg/m <sup>3</sup>
<b>Northwest Territories</b>	OEL TWA	10 mg/m <sup>3</sup>
<b>Québec</b>	VEMP (OEL TWA)	10 mg/m <sup>3</sup> (Limestone, containing no Asbestos and <1% Crystalline silica-total dust)
<b>Saskatchewan</b>	OEL STEL	20 mg/m <sup>3</sup>
<b>Saskatchewan</b>	OEL TWA	10 mg/m <sup>3</sup>
<b>Yukon</b>	OEL STEL	20 mg/m <sup>3</sup>
<b>Yukon</b>	OEL TWA	30 mppcf 10 mg/m <sup>3</sup>

### Magnesium oxide (MgO) (1309-48-4)

<b>USA ACGIH</b>	ACGIH OEL TWA	10 mg/m <sup>3</sup> (inhalable particulate matter)
<b>USA ACGIH</b>	ACGIH chemical category	Not Classifiable as a Human Carcinogen
<b>USA OSHA</b>	OSHA PEL (TWA) [1]	15 mg/m <sup>3</sup> (fume, total particulate)
<b>USA IDLH</b>	IDLH	750 mg/m <sup>3</sup> (fume)
<b>Alberta</b>	OEL TWA	10 mg/m <sup>3</sup> (fume)
<b>British Columbia</b>	OEL STEL	10 mg/m <sup>3</sup> (respirable dust and fume)
<b>British Columbia</b>	OEL TWA	10 mg/m <sup>3</sup> (fume, inhalable) 3 mg/m <sup>3</sup> (respirable dust and fume)
<b>Manitoba</b>	OEL TWA	10 mg/m <sup>3</sup> (inhalable particulate matter)
<b>New Brunswick</b>	OEL TWA	10 mg/m <sup>3</sup> (fume)
<b>Newfoundland &amp; Labrador</b>	OEL TWA	10 mg/m <sup>3</sup> (inhalable particulate matter)
<b>Nova Scotia</b>	OEL TWA	10 mg/m <sup>3</sup> (inhalable particulate matter)
<b>Nunavut</b>	OEL STEL	20 mg/m <sup>3</sup> (inhalable fraction)
<b>Nunavut</b>	OEL TWA	10 mg/m <sup>3</sup> (inhalable fraction)
<b>Northwest Territories</b>	OEL STEL	20 mg/m <sup>3</sup> (inhalable fraction)
<b>Northwest Territories</b>	OEL TWA	10 mg/m <sup>3</sup> (inhalable fraction)
<b>Ontario</b>	OEL TWA	10 mg/m <sup>3</sup> (inhalable particulate matter)
<b>Prince Edward Island</b>	OEL TWA	10 mg/m <sup>3</sup> (inhalable particulate matter)
<b>Québec</b>	VEMP (OEL TWA)	10 mg/m <sup>3</sup> (inhalable dust)
<b>Saskatchewan</b>	OEL STEL	20 mg/m <sup>3</sup> (inhalable fraction)
<b>Saskatchewan</b>	OEL TWA	10 mg/m <sup>3</sup> (inhalable fraction)
<b>Yukon</b>	OEL STEL	10 mg/m <sup>3</sup> (fume)
<b>Yukon</b>	OEL TWA	10 mg/m <sup>3</sup> (fume)

### Cement, portland, chemicals (65997-15-1)

<b>USA ACGIH</b>	ACGIH OEL TWA	1 mg/m <sup>3</sup> (particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter)
<b>USA ACGIH</b>	ACGIH chemical category	Not Classifiable as a Human Carcinogen
<b>USA OSHA</b>	OSHA PEL (TWA) [1]	15 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (respirable fraction)
<b>USA OSHA</b>	OSHA PEL (TWA) [2]	50 mppcf (<1% Crystalline silica) (See 29 CFR 1910.1000 TABLE Z-3)
<b>USA NIOSH</b>	NIOSH REL (TWA)	10 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (respirable dust)
<b>USA IDLH</b>	IDLH	5000 mg/m <sup>3</sup>
<b>Alberta</b>	OEL TWA	10 mg/m <sup>3</sup>
<b>British Columbia</b>	OEL TWA	1 mg/m <sup>3</sup> (particulate matter containing no Asbestos and <1% Crystalline silica-respirable particulate)
<b>Manitoba</b>	OEL TWA	1 mg/m <sup>3</sup> (particulate matter containing no Asbestos and <1% Crystalline silica, respirable particulate matter-particulate matter, respirable particulate matter)

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<b>New Brunswick</b>	OEL TWA	10 mg/m <sup>3</sup> (particulate matter containing no Asbestos and <1% Crystalline silica)
<b>Newfoundland &amp; Labrador</b>	OEL TWA	1 mg/m <sup>3</sup> (particulate matter containing no Asbestos and <1% Crystalline silica, respirable particulate matter-particulate matter, respirable particulate matter)
<b>Nova Scotia</b>	OEL TWA	1 mg/m <sup>3</sup> (particulate matter containing no Asbestos and <1% Crystalline silica, respirable particulate matter-particulate matter, respirable particulate matter)
<b>Nunavut</b>	OEL STEL	20 mg/m <sup>3</sup>
<b>Nunavut</b>	OEL TWA	10 mg/m <sup>3</sup>
<b>Northwest Territories</b>	OEL STEL	20 mg/m <sup>3</sup>
<b>Northwest Territories</b>	OEL TWA	10 mg/m <sup>3</sup>
<b>Ontario</b>	OEL TWA	1 mg/m <sup>3</sup> (particulate matter containing no Asbestos and <1% Crystalline silica-respirable particulate matter)
<b>Prince Edward Island</b>	OEL TWA	1 mg/m <sup>3</sup> (particulate matter containing no Asbestos and <1% Crystalline silica, respirable particulate matter-particulate matter, respirable particulate matter)
<b>Québec</b>	VEMP (OEL TWA)	10 mg/m <sup>3</sup> (containing no Asbestos and <1% Crystalline silica-total dust) 5 mg/m <sup>3</sup> (containing no Asbestos and <1% Crystalline silica-respirable dust)
<b>Saskatchewan</b>	OEL STEL	20 mg/m <sup>3</sup>
<b>Saskatchewan</b>	OEL TWA	10 mg/m <sup>3</sup>
<b>Yukon</b>	OEL STEL	20 mg/m <sup>3</sup>
<b>Yukon</b>	OEL TWA	30 mppcf 10 mg/m <sup>3</sup>
<b>Calcium oxide (1305-78-8)</b>		
<b>USA ACGIH</b>	ACGIH OEL TWA	2 mg/m <sup>3</sup>
<b>USA OSHA</b>	OSHA PEL (TWA) [1]	5 mg/m <sup>3</sup>
<b>USA NIOSH</b>	NIOSH REL (TWA)	2 mg/m <sup>3</sup>
<b>USA IDLH</b>	IDLH	25 mg/m <sup>3</sup>
<b>Alberta</b>	OEL TWA	2 mg/m <sup>3</sup>
<b>British Columbia</b>	OEL TWA	2 mg/m <sup>3</sup>
<b>Manitoba</b>	OEL TWA	2 mg/m <sup>3</sup>
<b>New Brunswick</b>	OEL TWA	2 mg/m <sup>3</sup>
<b>Newfoundland &amp; Labrador</b>	OEL TWA	2 mg/m <sup>3</sup>
<b>Nova Scotia</b>	OEL TWA	2 mg/m <sup>3</sup>
<b>Nunavut</b>	OEL STEL	4 mg/m <sup>3</sup>
<b>Nunavut</b>	OEL TWA	2 mg/m <sup>3</sup>
<b>Northwest Territories</b>	OEL STEL	4 mg/m <sup>3</sup>
<b>Northwest Territories</b>	OEL TWA	2 mg/m <sup>3</sup>
<b>Ontario</b>	OEL TWA	2 mg/m <sup>3</sup>
<b>Prince Edward Island</b>	OEL TWA	2 mg/m <sup>3</sup>
<b>Québec</b>	VEMP (OEL TWA)	2 mg/m <sup>3</sup>
<b>Saskatchewan</b>	OEL STEL	4 mg/m <sup>3</sup>
<b>Saskatchewan</b>	OEL TWA	2 mg/m <sup>3</sup>
<b>Yukon</b>	OEL STEL	4 mg/m <sup>3</sup>
<b>Yukon</b>	OEL TWA	2 mg/m <sup>3</sup>
<b>Gypsum (Ca(SO4).2H2O) (13397-24-5)</b>		
<b>USA ACGIH</b>	ACGIH OEL TWA	10 mg/m <sup>3</sup> (inhalable particulate matter (Calcium sulfate)
<b>USA OSHA</b>	OSHA PEL (TWA) [1]	15 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (respirable fraction)
<b>USA NIOSH</b>	NIOSH REL (TWA)	10 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (respirable dust)
<b>Alberta</b>	OEL TWA	10 mg/m <sup>3</sup> (Calcium sulphate)
<b>British Columbia</b>	OEL STEL	20 mg/m <sup>3</sup> (total)
<b>British Columbia</b>	OEL TWA	10 mg/m <sup>3</sup> (total dust)

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		3 mg/m <sup>3</sup> (respirable fraction) 10 mg/m <sup>3</sup> (regulated under Calcium sulfate-inhalable)
Manitoba	OEL TWA	10 mg/m <sup>3</sup> (inhalable particulate matter (Calcium sulfate))
Newfoundland & Labrador	OEL TWA	10 mg/m <sup>3</sup> (inhalable particulate matter (Calcium sulfate))
Nova Scotia	OEL TWA	10 mg/m <sup>3</sup> (inhalable particulate matter (Calcium sulfate))
Ontario	OEL TWA	10 mg/m <sup>3</sup> (inhalable particulate matter (Calcium sulfate))
Prince Edward Island	OEL TWA	10 mg/m <sup>3</sup> (inhalable particulate matter (Calcium sulfate))
Québec	VEMP (OEL TWA)	10 mg/m <sup>3</sup> (containing no Asbestos and <1% Crystalline silica-inhalable dust)
Saskatchewan	OEL STEL	20 mg/m <sup>3</sup>
Saskatchewan	OEL TWA	10 mg/m <sup>3</sup>
Yukon	OEL STEL	20 mg/m <sup>3</sup>
Yukon	OEL TWA	30 mppcf 10 mg/m <sup>3</sup>

<b>Calcium hydroxide (1305-62-0)</b>		
USA ACGIH	ACGIH OEL TWA	5 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) [1]	15 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (respirable fraction)
USA NIOSH	NIOSH REL (TWA)	5 mg/m <sup>3</sup>
Alberta	OEL TWA	5 mg/m <sup>3</sup>
British Columbia	OEL TWA	5 mg/m <sup>3</sup>
Manitoba	OEL TWA	5 mg/m <sup>3</sup>
New Brunswick	OEL TWA	5 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL TWA	5 mg/m <sup>3</sup>
Nova Scotia	OEL TWA	5 mg/m <sup>3</sup>
Nunavut	OEL STEL	10 mg/m <sup>3</sup>
Nunavut	OEL TWA	5 mg/m <sup>3</sup>
Northwest Territories	OEL STEL	10 mg/m <sup>3</sup>
Northwest Territories	OEL TWA	5 mg/m <sup>3</sup>
Ontario	OEL TWA	5 mg/m <sup>3</sup>
Prince Edward Island	OEL TWA	5 mg/m <sup>3</sup>
Québec	VEMP (OEL TWA)	5 mg/m <sup>3</sup>
Saskatchewan	OEL STEL	10 mg/m <sup>3</sup>
Saskatchewan	OEL TWA	5 mg/m <sup>3</sup>
Yukon	OEL STEL	10 mg/m <sup>3</sup>
Yukon	OEL TWA	5 mg/m <sup>3</sup>

## 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.

**Personal Protective Equipment:** Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.



**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:** 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.



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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on Basic Physical and Chemical Properties

Physical State	: Solid
Appearance	: Semi-fluid, Flowable, granular paste. Variety of color (usually gray)
Odor	: Odorless
Odor Threshold	: Not available
pH	: 12 – 13 (in water)
Evaporation Rate	: Not available
Melting Point	: Not available
Freezing Point	: Not available
Boiling Point	: > 1000 °C (1832 °F)
Flash Point	: Not available
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Lower Flammable Limit	: Not available
Upper Flammable Limit	: Not available
Vapor Pressure	: Not available
Relative Vapor Density at 20°C	: Not available
Relative Density	: 1.9 – 2.4 (water = 1)
Specific Gravity	: Not available
Solubility	: Water: 0.1 – 1 % (slightly soluble)
Partition Coefficient: N-Octanol/Water	: Not available
Viscosity	: Varies

## SECTION 10: STABILITY AND REACTIVITY

- 10.1. Reactivity:** Hazardous reactions will not occur under normal conditions.
- 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:** Direct sunlight, extremely high or low temperatures, and incompatible materials.
- 10.5. Incompatible Materials:** 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:** Thermal decomposition may produce: Calcium oxides. Carbon oxides (CO, CO<sub>2</sub>). Oxides of magnesium. Silicon oxides.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on Toxicological Effects - Product

**Acute Toxicity (Oral):** Not classified

**Acute Toxicity (Dermal):** Not classified

**Acute Toxicity (Inhalation):** Not classified

**LD50 and LC50 Data:** Not available

**Skin Corrosion/Irritation:** Causes skin irritation.

**pH:** 12 – 13 (in water)

**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:** May cause cancer (Inhalation).

**Specific Target Organ Toxicity (Repeated Exposure):** Causes damage to organs (lung/respiratory system) through prolonged or repeated exposure (Inhalation).

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**Reproductive Toxicity:** Not classified

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

**Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** Irritation of the respiratory tract and the other mucous membranes. Some studies show that exposure to respirable crystalline silica (without silicosis) or that the disease silicosis may be associated with the increased incidence of several autoimmune disorders such as scleroderma (thickening of the skin), systemic lupus erythematosus, rheumatoid arthritis and diseases affecting the kidneys. Silicosis increases the risk of tuberculosis. Some studies show an increased incidence of chronic kidney disease and end-stage renal disease in workers exposed to respirable crystalline silica.

**Symptoms/Injuries After Skin Contact:** Redness, pain, swelling, itching, burning, dryness, and dermatitis. May cause an allergic skin reaction. May cause skin to become dry or cracked.

**Symptoms/Injuries After Eye Contact:** Causes permanent damage to the cornea, iris, or conjunctiva. Concrete may cause immediate or delayed irritation or inflammation. Eye contact with wet concrete 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:** 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.

### 11.2. Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

<b>Quartz (14808-60-7)</b>	
LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rat	> 5000 mg/kg
<b>Magnesium oxide (MgO) (1309-48-4)</b>	
LD50 Oral Rat	3870 mg/kg
<b>Calcium oxide (1305-78-8)</b>	
LD50 Oral Rat	> 2000 mg/kg
LD50 Dermal Rabbit	> 2500 mg/kg
<b>Calcium hydroxide (1305-62-0)</b>	
LD50 Oral Rat	7340 mg/kg
LD50 Dermal Rat	> 2500 mg/kg
<b>Ashes, residues (68131-74-8)</b>	
LD50 Oral Rat	> 2000 mg/kg
<b>Quartz (14808-60-7)</b>	
IARC Group	1
National Toxicology Program (NTP) Status	Known Human Carcinogens.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

**Ecology - General:** Not classified.

<b>Calcium oxide (1305-78-8)</b>	
LC50 Fish 1	50.6 mg/l

### 12.2. Persistence and Degradability

<b>Ready Mix Concrete</b>	
Persistence and Degradability	Not established.

### 12.3. Bioaccumulative Potential

<b>Ready Mix Concrete</b>	
Bioaccumulative Potential	Not established.
<b>Calcium oxide (1305-78-8)</b>	
BCF Fish 1	(no bioaccumulation)
<b>Calcium hydroxide (1305-62-0)</b>	
BCF Fish 1	(no bioaccumulation)

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**12.4. Mobility in Soil** Not 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, territorial, provincial, and international regulations.

**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

**14.4. In Accordance with TDG** Not regulated for transport

### SECTION 15: REGULATORY INFORMATION

#### 15.1. US Federal Regulations

Ready Mix Concrete	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard Health hazard - Specific target organ toxicity (single or repeated exposure) Health hazard - Carcinogenicity Health hazard - Respiratory or skin sensitization Health hazard - Skin corrosion or Irritation Health hazard - Serious eye damage or eye irritation
<b>Quartz (14808-60-7)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Limestone (1317-65-3)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Magnesium oxide (MgO) (1309-48-4)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Cement, portland, chemicals (65997-15-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Calcium oxide (1305-78-8)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Calcium hydroxide (1305-62-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Ashes, residues (68131-74-8)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

#### 15.2. US State Regulations

##### California Proposition 65



**WARNING:** This product can expose you to Quartz, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Chemical Name (CAS No.)	Carcinogenicity	Developmental Toxicity	Female Reproductive Toxicity	Male Reproductive Toxicity
Quartz (14808-60-7)	X			

##### Quartz (14808-60-7)

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

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U.S. - Massachusetts - Right To Know List
<b>Limestone (1317-65-3)</b>
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List
<b>Magnesium oxide (MgO) (1309-48-4)</b>
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List
<b>Cement, portland, chemicals (65997-15-1)</b>
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List
<b>Calcium oxide (1305-78-8)</b>
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List
<b>Gypsum (Ca(SO4).2H2O) (13397-24-5)</b>
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
<b>Calcium hydroxide (1305-62-0)</b>
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List

### 15.3. Canadian Regulations

<b>Quartz (14808-60-7)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Limestone (1317-65-3)</b>
Listed on the Canadian NDSL (Non-Domestic Substances List)
<b>Magnesium oxide (MgO) (1309-48-4)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Cement, portland, chemicals (65997-15-1)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Calcium oxide (1305-78-8)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Gypsum (Ca(SO4).2H2O) (13397-24-5)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Calcium hydroxide (1305-62-0)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Ashes, residues (68131-74-8)</b>
Listed on the Canadian DSL (Domestic Substances List)

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

**Date of Preparation or Latest** : 03/12/2022

**Revision**

**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR) SOR/2015-17.

**GHS Full Text Phrases:**

Aquatic Acute 3

Hazardous to the aquatic environment - Acute Hazard Category 3

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Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Carc. 1A	Carcinogenicity Category 1A
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Skin Irrit. 2	Skin corrosion/irritation Category 2
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, Respiratory tract irritation
H315	Causes skin irritation
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
H402	Harmful to aquatic life
H412	Harmful to aquatic life with long lasting effects

## Indication of Changes

Section	Change	Date Changed	Version
1	Modified responsible party information, logo & emergency telephone number	03/12/2022	3.1

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