



# Safety Data Sheet

Ready Mix Concrete (Concrete)

## Section 1: Identification

**Product:** Ready Mix Concrete (Concrete)

**Synonyms:** Freshly Mixed Unhardened Concrete, Colored Concrete Fiber Reinforced, Flowable Fill, Pervious Concrete, Sand & Gravel Slurry, Light-Weight Concrete, Cold Weather Concrete

**Product Use:** Concrete is widely used as a structural component in construction applications.

**Manufacture:** **Advanced Concrete Inc.**  
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Phone: 608-849-8880  
Phone: 608-455-4050  
advanced-concreteinc.com

## Section 2: Hazard(s) Identification

### GHS Label Elements:

#### Symbol(s)



#### Signal Word

Warning!

#### Hazard

Harmful if inhaled.

#### Statements

Harmful if swallowed.

Harmful in contact with skin.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Causes damage to organs through prolonged or repeated exposure (lungs).

Harmful to aquatic life.

#### Precautionary Statements

##### Prevention

Do not breathe dust.

Wear protective gloves/protective clothing/eye protection/face protection.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Do not handle until all safety precautions have been read and understood.

##### Response

If inhaled: Remove to fresh air, seek medical attention if breathing becomes difficult or other symptoms do not subside.

If swallowed: Rinse mouth. Do NOT induce vomiting. If conscious, drink plenty of water. Immediately call a poison center or physician.

If on skin: Wash skin with cool water and a pH-neutral soap. Seek medical attention if irritation or inflammation develops or persists.

In the eyes: Immediately flush eye thoroughly with water for at least 15 minutes, including under the lid.

Remove contact lenses, if worn. If irritation persists, seek medical attention.

Take off contaminated clothing and wash it before reuse.

##### Disposal

Dispose in accordance with State, Federal and Local regulations.



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### Section 3: Composition/Information on Ingredients

Component	Percent* (By Weight)	CAS Number	OSHA PEL -- TWA (mg/m <sup>3</sup> )	ACGIH TLV -- TWA (mg/m <sup>3</sup> )
Portland Cement	10-30	65997-15-1	15 (T); 5 (R)	10 (T)
Fly Ash	0-20	68131-74-8	15 (T); 5 (R)	10 (T)
Crystalline Silica (Sand and Gravel)	35-95	14808-60-7	[(10) / (%SiO <sub>2</sub> +2)] (R); [(30) / (%SiO <sub>2</sub> +2)] (T)	0.025 (R)
Slag Cement	0-20	65996-69-2		

(T) - Total Particulate      (R) - Respirable Particulate      \* Varies on Type of Mix

**General Product Information** Trace Elements: Ready Mix Concrete is made from materials mined from the earth. Trace amounts of naturally occurring elements might be detected during chemical analysis of these materials.

### Section 4: First Aid Measures

- Eyes** Immediately flush eyes thoroughly with water. Continue flushing eyes for at least 15 minutes, including under the lids, to remove all particles. Remove contact lens if wearing. Call physician if irritation persists.
- Skin** Wash skin with cool water and pH-neutral soap or a mild detergent intended to be used on the skin. Seek medical attention for rash, burns, irritation, dermatitis, and prolonged unprotected exposures to wet concrete.
- Ingestion** Do NOT induce vomiting. Rinse mouth. If conscious, give plenty of water to drink and seek medical attention.
- Inhalation** Remove to fresh air. Seek medical attention if coughing and other symptoms do not subside. Inhalation of large amounts of dry ingredients in Ready Mix Concrete requires immediate medical attention.

### Section 5: Fire Fighting Measures

- General Fire Hazards** See Section 9 for Flammability Properties  
Non-Combustible
- Hazardous Combustion Products** None
- Extinguishing Media** Use appropriate extinguishing media for surrounding fire.
- Unsuitable Extinguishing Media** None
- Fire Fighting Equipment/Instructions** Avoid breathing dust.  
Wet concrete is caustic.  
Firefighters should wear full protective gear.



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## Section 6: Accidental Release Measures

- General** Place spilled material into a container. Avoid contact with the skin. Wear appropriate protective equipment as described in Section 8. Scrape wet concrete and place in container. Allow material to dry or solidify before disposal. Do not wash concrete down sewage and drainage systems or into bodies of water (e.g. streams).
- Waste Disposal Method** Dispose of concrete according to State, Federal and Local regulations.

## Section 7: Handling and Storage

- Usage** Cutting, crushing or grinding hardened concrete, cement 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.
- Clothing** Promptly remove and launder clothing that is wet with concrete. Thoroughly wash skin after exposure to wet concrete.

## Section 8: Exposure Controls/Personal Protection

- Engineering Controls** Use local exhaust or general dilution ventilation or other suppression method to maintain dust levels below exposure limits.
- Respiratory Protection** Under ordinary conditions no respirator protection is required. A NIOSH approved respirator that is properly fitted and is in good working condition is recommended in poorly ventilated areas or when exposed to dust above exposure limits.
- Eye Protection** Wear ANSI approved safety glasses with side shields or safety goggles when handling wet concrete to prevent contact with eyes. Wearing contact lenses when using concrete is not recommended.
- Skin Protection** Wear gloves, boots and protective clothing (long sleeve shirt and pants) impervious to water to prevent skin contact. Do not rely on barrier creams, in place of impervious gloves. Remove clothing and protective equipment that becomes saturated with wet concrete and immediately wash exposed areas.
- Hygienic Practices** Wash exposed skin with soap and water before eating, drinking, smoking and using toilet facilities. Shower with soap and water after completion of work.

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Semi-fluid, Flowable, granular paste.	<b>Evaporation Rate:</b>	NA
<b>Appearance:</b>	Variety of color (usually gray)	<b>pH (In Water)</b>	12-13
<b>Odor:</b>	None	<b>Boiling Point:</b>	NA
<b>Vapor Pressure</b>	NA	<b>Melting Point:</b>	NA
<b>Vapor Density:</b>	NA	<b>Viscosity:</b>	Varies
<b>Specific Gravity:</b>	1.9 - 2.4	<b>Solubility in Water:</b>	Slightly
<b>Ignition:</b>	Non-Flammable	<b>Flash Point:</b>	NA



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## Section 10: Stability and Reactivity

<b>Stability</b>	Stable. Avoid contact with incompatible materials.
<b>Incompatibility</b>	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.
<b>Hazardous Polymerization</b>	None
<b>Hazardous Decomposition</b>	None

## Section 11: Toxicological Information

<b>Likely Routes of Exposure:</b>	Skin contact, skin absorption, eye contact, inhalation, and ingestion.
<b>Potential Health Effects: Skin Corrosion</b>	Discomfort or pain cannot be relied upon to alert a person to a hazardous skin exposure. Consequently, the only effective means of avoiding skin injury or illness involves minimizing skin contact, particularly contact with wet concrete. Exposed persons may not feel discomfort until hours after the exposure has ended and significant injury has occurred. Exposure during the handling or mixing of the dry ingredients in Ready Mix Concrete may cause drying of the skin with consequent mild irritation or more significant effects attributable to aggravation of other conditions. Exposure to wet concrete may cause more severe skin effects including thickening, cracking or fissuring of the skin. Prolonged exposure can cause severe skin damage in the form of (caustic) chemical burns, including third degree burns.
<b>Potential Health Effects: Eye Damage</b>	Exposure to airborne dust during the sawing of hardened concrete or handling/mixing of the dry ingredients in Ready Mix Concrete may cause immediate or delayed irritation or inflammation. Eye contact by splashes of wet concrete may cause effects ranging from moderate eye irritation to chemical burns. Such exposures require immediate first aid (see Section 4) and medical attention to prevent significant damage to the eye.
<b>Potential Health Effects: Ingestion</b>	Although inadvertent ingestion of small quantities of wet concrete or its dry ingredients are not known to be harmful, accidental ingestion of larger quantities can be harmful and requires immediate medical attention.
<b>Potential Health Effects: Inhalation (Acute)</b>	The ingredients in Ready Mix Concrete contain crystalline silica. Exposure to these ingredients in excess of the applicable TLV or PEL may cause or aggravate other lung conditions. Exposure to the dry ingredients in Ready Mix Concrete may cause irritation to the moist mucous membranes of the nose, throat, and upper respiratory system.
<b>Carcinogenicity General Product Information (Chronic)</b>	May cause cancer. Crystalline Silica: Exposures to respirable crystalline silica are not expected during the normal use of this product. Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease and/or lung cancer. IARC states that crystalline silica in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).



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## Component Carcinogenicity

**Cement, Portland,  
Chemicals**

ACGIH: Not Classifiable as a Human Carcinogen. However, cement contains trace amounts of crystalline silica and hexavalent chromium which are classified by the IARC and NTP as known human carcinogens.

**Crystalline Silica,  
Quartz**

ACGIH: Suspected Human Carcinogen  
NIOSH: Potential Occupational Carcinogen  
NTP: Known Human Carcinogen  
IARC: Monograph 100C [2012] Crystalline silica in the form of quartz Or cristobalite is carcinogenic to humans (Group 1)

**Reproductive Toxicity**

This product is not reported to have any reproductive toxicity effects.

**Specific Target Organ**

This product is not reported to have any single exposure specific target organ toxicity effects.

**General Toxicity:  
Single Exposure**

**Specific Target Organ**

Causes damage to organs through prolonged or repeated exposure (lungs).

**General Toxicity:**

**Repeated Exposure**

**Aspiration Respiratory**

This product is not reported to have any aspiration hazards.

**Organ Hazard**

## Section 12: Ecological Information (Non-Mandatory)

Seek information from appropriate regulatory agencies.

## Section 13: Disposal Consideration (Non-Mandatory)

**Waste Disposal  
Instructions**

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

**Disposal of Contaminated  
Container or Packaging**

Dispose of contents/container in accordance with State, Federal and Local regulations.

## Section 14: Transport Information (Non-Mandatory)

This product is not classified as a Hazardous Material under U.S. DOT regulations.

## Section 15: Regulatory Information (Non-Mandatory)

**OSHA/MSHA Hazard  
Communication**

This product is considered by OSHA/MSHA to be a hazardous chemical and should be included in the employer's hazard communication program.

**CERCLA/SUPERFUND**

This **product** is not listed as a CERCLA hazardous substance.



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## Section 16: Other Information

### Abbreviations

<b>PPE</b>	Personal Protective Equipment	<b>NA</b>	Not Applicable
<b>ACGIH</b>	American Conference of Governmental Industrial Hygienists	<b>NIOSH</b>	National Institute for Occupational Safety and Health
<b>DOT</b>	U.S. Department of Transportation	<b>NTP</b>	National Toxicology Program
<b>HMIS</b>	Hazardous Materials Identification System	<b>PEL</b>	Permissible Exposure Limit
<b>IARC</b>	International Agency for Research on Cancer	<b>OSHA</b>	Occupational Safety and Health Administration
<b>MSHA</b>	Mine Safety and Health Administration	<b>Ph</b>	Negative log of hydrogen ions
<b>TLV</b>	Threshold Limit Value		

**HMIS:** Health-1, Flammability-0, Reactivity-0

**HMIS Definitions:** 0-Minimal, 1-Slight, 2-Moderate, 3-Serious, 4-Extreme

**Protective Equipment:** Safety glasses, gloves, impervious clothing, and boots (respirator if cutting/sawing hardened concrete)

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