



6/10/2015

Ready Mix

SAFETY DATA SHEET

1. Identification

Product Name: Ready Mix, Freshly Mixed Unhardened Concrete

Product Code: Ready Mix

SDS Date: 6/10/2015

Use: Industrial

Breckenridge Material Company
2833 Breckenridge Industrial Court
P.O. Box 440459
St. Louis, MO 63144

General Information: 314-962-1234
Emergency Number: 314-496-9157

Synonyms: Concrete Ready Mix, Portland Cement Concrete
Chemical Family: Calcium compounds, Silica Compounds

2. Hazard(s) identification

GHS Classification

Skin Corrosion/Irritation (Category 1), Serious Eye Damage/ Eye Irritation (Category 1), Specific target organ toxicity, single exposure (Category 3), Specific target organ toxicity - repeated exposure, Inhalation (Category 2), Skin Sensitization (Category 1), Carcinogenicity (Category 1)

Pictogram



Signalword Danger

Hazard Statement

Causes severe skin burns and eye damage. Causes serious eye damage. May cause respiratory irritation. May cause damage to organs through prolonged or repeated exposure. May cause an allergic skin reaction. May cause cancer.

Precautionary

Contaminated work clothing must not be allowed out of the workplace. Do not breathe dust. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Get medical advice/attention if you feel unwell. If exposed or concerned: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If inhaled: Remove person to fresh air and keep comfortable for breathing. If on skin (or hair): Take off immediately all contaminated clothing and wash before reuse. Wash skin with plenty of water/shower. If skin irritation or rash occurs: Get medical advice/attention. If swallowed: Rinse mouth. Do NOT induce vomiting. Immediately call a poison center/doctor. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazards not otherwise classified: Not available



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3. Composition/information on ingredients

Name	CAS	Concentration
Portland Cement	65997-15-1	3-25
Fly Ash	68131-74-8	0-5
Calcium Chloride	10043-52-4	0-2
Aggregates	1317-65-3	30-45
Crystalline Silica	14808-60-7	25-45

4. First-aid measures

General Advice	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
If Inhaled	Remove to fresh air. Seek medical help if coughing and other symptoms do not subside. (Inhalation of gross amounts of the dry ingredients in ready-mix concrete required immediate medical attention.)
In Case of Skin Contact	Wash skin with cool water and pH-neutral soap or mild detergent intended for use on skin. Seek medical treatment in all cases of prolonged exposure to wet concrete, liquids from wet concrete products, or prolonged wet skin exposure to the dry ingredients in ready-mix concrete.
In Case of Eye Contact	Immediately flush eyes thoroughly with water. Continue flushing eyes for at least 15 minutes, including under lids, to remove all particles. Call physician immediately.
If Swallowed	Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indications of any immediate medical attention and special treatment needed

No data available

5. Fire-fighting measures

Extinguishing Media	None
Special Hazards	None
Advice for firefighters	None
Further Information	Ready mix concrete is not combustible. Protect surrounding exposures using fire streams and extinguishing media appropriate for the materials involved in the fire.



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6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures

Wear appropriate personal protection equipment as described in Section 8

Environmental precautions

Do not attempt to wash wet concrete into sewers, storm drains, rivers, lakes, or streams.

Methods and materials for containment and cleaning up

Collect dry material using a scoop. Avoid actions that cause dust to become airborne. Avoid inhalation of dust and contact with skin. Scrape up wet material and place in an appropriate container. Allow the wet concrete to "harden" before disposal.

7. Handling and storage

Safe Handling

Promptly remove dusty clothing or clothing which is wet with concrete and launder before reuse. Wash thoroughly after exposure to dust or wet concrete mixtures.

Safe Storage

Normal temperatures and pressures do not affect the material.

8. Exposure controls/personal protection

Name		CAS	
Portland Cement		65997-15-1	
OSHA TWA	OSHA STEL	ACGIH TWA	ACGIH STEL
15 mg/m3	Not Available	10 mg/m3	Not Available
Fly Ash		68131-74-8	
OSHA TWA	OSHA STEL	ACGIH TWA	ACGIH STEL
15 mg/m3	Not Available	10 mg/m3	Not Available
Calcium Chloride		10043-52-4	
OSHA TWA	OSHA STEL	ACGIH TWA	ACGIH STEL
Not Available	Not Available	Not Available	Not Available
Aggregates		1317-65-3	
OSHA TWA	OSHA STEL	ACGIH TWA	ACGIH STEL
15 mg/m3	Not Available	10 mg/m3	Not Available
Crystalline Silica		14808-60-7	
OSHA TWA	OSHA STEL	ACGIH TWA	ACGIH STEL
10/(%SiO ₂ +2)	Not Available	0.1 mg/m3	Not Available



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Engineering Control	Use local exhaust or general ventilation to control exposures below applicable exposure limits; especially indoors and in confined spaces.
Eye/Face Protection	When engaged in activities where wet concrete or its dry ingredients could contact the eye, wear safety glasses with side shields or goggles. In extremely dusty environments and unpredictable environments, wear unvented or indirectly vented goggles to avoid eye irritation or injury. Contact lenses should not be worn when working around wet concrete or its dry ingredients.
Skin Protection	Avoid contact with wet concrete products or its dry ingredients. Wear impervious gloves to eliminate skin contact. Do not rely on barrier creams; barrier creams should not be used in place of gloves.
Body Protection	Prevention is essential to avoid potentially severe skin injury. Avoid contact with wet concrete products or its dry ingredients. Wear long sleeves and pants to prevent exposure to skin. Where prolonged exposure to wet concrete products might occur, wear impervious clothing to eliminate skin contact. Where required, wear boots that are impervious to water to eliminate foot and ankle exposure. If clothing becomes saturated with wet concrete, it should be removed and replaced with clean dry clothing.
Respiratory Protection	Avoid actions that cause dust exposure to occur. NIOSH approved particulate filter respirators should be used in the context of respiratory protection programs meeting the requirements of the OSHA respiratory protection standard (29CFR 1910.134) to control exposures when ventilation or other controls are inadequate. Respirator and/or filter cartridge selection should be based on American National Standards Institute (ANSI) Standards Z88.2 Practices for Respiratory Protection.
Control of Environmental Exposure	Prevent further leakage or spillage if safe to do so.



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9. Physical and chemical properties

Appearance	Semi-fluid, flowable, granular paste. Variety of color (usually gray)
Odor	None
Odor Threshold	No data available
pH	12.0-13.5
Melting/Freezing Point	No data available
Initial Boiling Point/Range	No data available
Flash Point	No data available
Evaporation Rate	No data available
Flammability	No data available
Upper Explosion Limit	No data available
Lower Explosion Limit	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Relative Density	1.7-3.0
Water Solubility	Slightly Soluble
Partition Coefficient	No data available
Auto Ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	212F (Water Content)



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10. Stability and reactivity

Reactivity No data available

Chemical Stability Stable

Possibility of Hazardous Reactions Polymerization will not occur

Conditions to Avoid No data available

Incompatible materials Incompatible with acids, ammonium salts, and aluminum metal. Cement dissolves in hydrofluoric acid, producing corrosive silicon tetrafluoride gas. Adding water results in hydration and produces (caustic) calcium hydroxide.

Hazardous Decomposition Products None

11. Toxicological information

Name	CAS
Portland Cement	65997-15-1
Oral: No data available	
Inhalation: No data available	
Dermal: No data available	
Skin corrosion/irritation No data available	
Serious eye damage/eye irritation No data available	
Respiratory or skin sensitization No data available	
Germ cell mutagenicity No data available	
Carcinogenicity No data available	
Reproductive No data available	
Additional information No data available	



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Name

CAS

Fly Ash

68131-74-8

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation No data available

Serious eye damage/eye irritation No data available

Respiratory or skin sensitization No data available

Germ cell mutagenicity No data available

Carcinogenicity No data available

Reproductive No data available

Additional information No data available

Name

CAS

Calcium Chloride

10043-52-4

LD50 Oral - Rat - 2,301 mg/kg

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation Result: No skin irritation

Serious eye damage/eye irritation Result: Moderate eye irritation

Respiratory or skin sensitization No data available

Germ cell mutagenicity No data available

Carcinogenicity Not identified as probable, possible or confirmed human carcinogen by IARC, NTP, or OSHA

Reproductive No data available

Additional information No data available



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Name	CAS
Aggregates	1317-65-3
LD50 Oral - Rat - 6,450 mg/kg	
Inhalation: No data available	
Dermal: No data available	
Skin corrosion/irritation Result: No skin irritation	
Serious eye damage/eye irritation Result: Mild eye irritation	
Respiratory or skin sensitization No data available	
Germ cell mutagenicity No data available	
Carcinogenicity Not identified as probable, possible or confirmed human carcinogen by IARC, NTP, or OSHA	
Reproductive No data available	
Additional information No data available	



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Name **CAS**
 Crystalline Silica 14808-60-7
 Oral: No data available
 Inhalation: No data available
 Dermal: No data available
Skin corrosion/irritation No data available
Serious eye damage/eye irritation No data available
Respiratory or skin sensitization No data available
Germ cell mutagenicity No data available
Carcinogenicity IARC: 1 - Group 1: Carcinogenic to humans (Quartz), NTP: Known to be human carcinogen (Quartz)
Reproductive No data available

Additional information Prolonged inhalation of crystalline silica may result in silicosis, a disabling pulmonary fibrosis characterized by fibrotic changes and miliary nodules in the lungs, a dry cough, shortness of breath, emphysema, decreased chest expansion, and increased susceptibility to tuberculosis. In advanced stages, loss of appetite, pleuritic pain, and total incapacity to work. Advanced silicosis may result in death due to cardiac failure or destruction of lung tissue. Crystalline silica is classified as group 1 "known to be carcinogenic to humans" by IARC and "sufficient evidence" of carcinogenicity by the NTP., The chronic health risks are associated with respirable particles of 3-4 um over protracted periods of time. Currently, there is a limited understanding of the mechanisms of quartz toxicity, including its mechanisms for lung carcinogenicity. Additional studies are needed to determine whether the cell transforming activity of quartz is related to its carcinogenic potential.

12. Ecological information

Name	CAS	Toxicity
Portland Cement	65997-15-1	No Data Available
Fly Ash	68131-74-8	No Data Available
Calcium Chloride	10043-52-4	LC50 - Lepomis macrochirus - 10,650 mg/l - 96 h, EC50 - Daphnia magna (Water flea) - 2,400 mg/l - 48 h
Aggregates	1317-65-3	No Data Available
Crystalline Silica	14808-60-7	No Data Available



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13. Disposal considerations

Dispose of contents/container in accordance with local/regional/national/international regulations.

14. Transport information

Ready-Mix concrete is not classified as a Hazardous Material under U.S. Department of Transportation (DOT) or Canadian TDG regulations.

15. Regulatory information

Name	CAS
Portland Cement	65997-15-1
SARA 302/304	No components were identified
SARA 313	No components were identified
CERCLA	No components were identified
SARA 311/312	Acute Health Hazard, Chronic Health Hazard
PROP 65	No components were identified

Name	CAS
Fly Ash	68131-74-8
SARA 302/304	No components were identified
SARA 313	No components were identified
CERCLA	No components were identified
SARA 311/312	Acute Health Hazard
PROP 65	No components were identified

Name	CAS
Calcium Chloride	10043-52-4
SARA 302/304	No components were identified
SARA 313	No components were identified
CERCLA	No components were identified
SARA 311/312	No components were identified
PROP 65	No components were identified



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Name	CAS
Aggregates	1317-65-3
SARA 302/304	No components were identified
SARA 313	No components were identified
CERCLA	No components were identified
SARA 311/312	No components were identified
PROP 65	No components were identified

Name	CAS
Crystalline Silica	14808-60-7
SARA 302/304	No components were identified
SARA 313	No components were identified
CERCLA	No components were identified
SARA 311/312	Chronic Health Hazard
PROP 65	No components were identified

16. Other information, including date of preparation or last revision

SDS Date: 6/10/2015

Ready Mix concrete should only be used by knowledgeable persons. A key to using the product safely requires the user to recognize that portland cement chemically reacts with water, and that some of the intermediate products of this reaction (that is, those present while a concrete product is "setting") pose a far more severe hazard than does portland cement itself.

While the information provided in this material safety data sheet is believed to provide a useful summary of the hazards of unhardened (wet) Ready-Mix concrete 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 does not address hazards that may be posed by materials other than natural sands and gravels mixed with portland cement and flyash to produce Ready-Mix concrete products. Users should review other relevant material safety data sheets before working with this portland cement concrete.



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