



Portland Cement

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

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Version: 1.1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name(s) : Portland Cement, Hydraulic Cement, Class A Oil Well Cement, White Cement, Type I, IA, II, I/II, III, V
Product code : Not available

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Concrete mixes for construction use.

1.3. Details of the supplier of the safety data sheet

Ash Grove Cement Company
11011 Cody
Overland Park, KS 66210
T 913-451-8900

1.4. Emergency telephone number

Emergency number : CHEMTREC (800) 424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin corrosion 1A
Serious Eye Damage 1
Skin Sensitization 1
Carcinogenicity 1A
Specific Target Organ Toxicity After Single Exposure 3

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) : Danger
Hazard statements (GHS-US) : Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause cancer. May cause respiratory irritation.
Prevention statements (GHS-US) : Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Do not breathe dusts. Wash hands thoroughly after handling. Wear protective gloves and clothing as well as eye and face protection. Use only outdoors or in a well-ventilated area. Do not eat, drink or smoke when using this product.
Response statements (GHS-US) : If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Take off contaminated clothing and wash before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a doctor if ingested or skin / eye irritation persists or worsens. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a doctor if you feel unwell.
Storage statements (GHS-US) : Store to keep product dry until use.
Disposal statements (GHS-US) : Dispose of contents and container in accordance with all local, state, and federal regulations.
Supplemental Information

Read and Follow all precautions listed in the Safety Data Sheet available on request or at Ashgrove.com. Additional information on the selection and use of respirators can be found in the [NIOSH Respirator Selection Logic](#) (DHHS [NIOSH] Publication No. 2005-100) and the [NIOSH Guide to Industrial Respiratory Protection](#) (DHHS [NIOSH] Publication No. 87-116) available at <http://www.cdc.gov/niosh/docs/87-116/>.

This product contains greater than 0.1% crystalline silica. Crystalline silica has been linked to cancer, silicosis, and other lung problems in conditions of prolonged airborne over-exposure.

Keep product dry until use. Avoid contact with bleed water from wet product. Clothing saturated with wet product can result in delayed, serious alkali skin burns.

2.3. Other hazards

Other hazards not contributing to the classification : Not applicable.

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2.4. Unknown acute toxicity (GHS-US)

82 % of the mixture consists of ingredient(s) of unknown acute toxicity.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Cement, portland, chemicals	(CAS No) 65997-15-1	90 - 95	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 3, H335
Gypsum (Ca(SO ₄).2H ₂ O)	(CAS No) 13397-24-5	4 - 8	Not classified
Magnesium oxide	(CAS No) 1309-48-4	0.5 - 7	Not classified
Limestone	(CAS No) 1317-65-3	≤ 5	Not classified
Calcium oxide	(CAS No) 1305-78-8	≤ 5	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335
Flue dust, portland cement	(CAS No) 68475-76-3	≤ 3	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 3, H335
Quartz	(CAS No) 14808-60-7	≤ 0.3	Acute Tox. 4 (Oral), H302 Carc. 1A, H350 STOT RE 1, H372

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical advice/attention.
- First-aid measures after skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing. Wash contaminated clothing before reuse. Get immediate medical advice/attention.
- First-aid measures after eye contact : If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a doctor.
- First-aid measures after ingestion : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after inhalation : May cause respiratory tract irritation.
- Symptoms/injuries after skin contact : Causes severe skin burns. Symptoms may include redness, pain, blisters. Do not allow product to harden around any body part or allow continuous, prolonged contact with skin. May cause sensitisation by skin contact, due to trace amounts of hexavalent chromium that may be present.
- Symptoms/injuries after eye contact : Causes serious eye damage. May cause burns. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
- Symptoms/injuries after ingestion : May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Treat for surrounding material.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Product does not burn; however its packaging may. Products of combustion may include, and are not limited to: oxides of carbon.

5.3. Advice for firefighters

Firefighting instructions : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Avoid contact with skin and eyes.

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6.2. Methods and material for containment and cleaning up

- For containment : Contain spill, then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
- Methods for cleaning up : Vacuum or sweep material and place in a disposal container. Provide ventilation.

6.3. Reference to other sections

No additional information available.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Avoid contact with skin and eyes. Avoid generating and breathing dust. Do not swallow. Good housekeeping is important to prevent accumulation of dust. The use of compressed air for cleaning clothing, equipment, etc, is not recommended. Handle and open container with care. When using do not eat, drink or smoke.
- Engulfment hazard. To prevent burial or suffocation, do not enter a confined space, such as a silo, dome, bin, bulk truck or other storage container or vessel that stores or contains cement. Cement can buildup or adhere to the walls of a confined space. The cement can release, collapse or fall unexpectedly.
- Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep out of the reach of children. Avoid any dust buildup by frequent cleaning and suitable construction of the storage area. Do not store in an area equipped with emergency water sprinklers. Clean up spilled material promptly.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Quartz (14808-60-7)		
USA ACGIH	ACGIH TWA (mg/m ³)	0.025 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	(30)/(%SiO ₂ + 2) mg/m ³ TWA, total dust (250)/(%SiO ₂ + 5) mppcf TWA, respirable fraction (10)/(%SiO ₂ + 2) mg/m ³ TWA, respirable fraction
Calcium oxide (1305-78-8)		
USA ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³
Limestone (1317-65-3)		
USA ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	15 mg/m ³ TWA (total dust) 5 mg/m ³ TWA (respirable fraction)
Cement, portland, chemicals (65997-15-1)		
USA ACGIH	ACGIH TWA (mg/m ³)	1 mg/m ³ (respirable fraction)
USA OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³ (respirable fraction)
Gypsum (Ca(SO ₄).2H ₂ O) (13397-24-5)		
USA ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	15 mg/m ³ TWA (total dust) 5 mg/m ³ TWA (respirable fraction)
Magnesium oxide (1309-48-4)		
USA ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	15 mg/m ³ TWA

8.2. Exposure controls

- Appropriate engineering controls : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.
- Hand protection : Wear suitable gloves.
- Eye protection : Wear approved eye protection (properly fitted dust- or splash-proof chemical safety goggles) and face protection (face shield).

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Skin and body protection	:	Wear suitable protective clothing.
Respiratory protection	:	A NIOSH approved dust mask or filtering facepiece is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2).
Environmental exposure controls	:	Maintain levels below Community environmental protection thresholds.
Other information	:	Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Powder.
Colour	:	Grey.
Odour	:	Odourless.
Odour threshold	:	No data available.
pH	:	12 - 13 (Highly alkaline when wet.)
Relative evaporation rate (butylacetate=1)	:	No data available.
Melting point	:	No data available.
Freezing point	:	No data available.
Boiling point	:	No data available.
Flash point	:	No data available.
Self ignition temperature	:	No data available.
Decomposition temperature	:	No data available.
Flammability (solid, gas)	:	Not flammable.
Vapour pressure	:	No data available.
Relative vapour density at 20 °C	:	No data available.
Relative density	:	2.9 - 3.1 (Water = 1)
Solubility	:	Slight. (Water: 0.1 - 1 %)
Log Pow	:	No data available.
Log Kow	:	No data available.
Viscosity, kinematic	:	No data available.
Viscosity, dynamic	:	No data available.
Explosive properties	:	No data available.
Oxidising properties	:	No data available.
Explosive limits	:	No data available.

9.2. Other information

VOC content	:	No data available.
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SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use. An alkali reaction from components of portland cement will corrode aluminum.

10.2. Chemical stability

Stable under normal storage conditions. Keep dry in storage.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use. Do not mix with other chemicals.

10.4. Conditions to avoid

Moisture – product must be kept dry until ready to use.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

None known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	:	Not classified.
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Quartz (14808-60-7)	
LD50 oral rat	500 mg/kg
Magnesium oxide (1309-48-4)	
LD50 oral rat	>5000 mg/kg
Limestone (1317-65-3)	
LD50 oral rat	6450 mg/kg
Calcium oxide (1305-78-8)	
LD50 oral rat	> 2000 mg/kg
Flue dust, portland cement (68475-76-3)	
LD50 oral rat	>1848 mg/kg
LD50 dermal rabbit	≥ 2000 mg/kg
LC50 inhalation rat	>6.04 mg/l/4h
Portland Cement	
ATE (oral)	> 2000 mg/kg, rat
ATE (dermal)	> 2000 mg/kg, rabbit
ATE (inhalation)	> 5 mg/l/4h, rat

Skin corrosion/irritation	: Causes severe skin burns.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Based on available data, the classification criteria are not met.
Carcinogenicity	: May cause cancer.

Quartz (14808-60-7)	
IARC group	1
National Toxicology Program (NTP) Status	2

Reproductive toxicity	: Based on available data, the classification criteria are not met.
Specific target organ toxicity (single exposure)	: May cause respiratory irritation.
Specific target organ toxicity (repeated exposure)	: Based on available data, the classification criteria are not met.
Aspiration hazard	: Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	: May cause respiratory tract irritation.
Symptoms/injuries after skin contact	: Causes severe skin burns. Symptoms may include redness, pain, blisters. Do not allow product to harden around any body part or allow continuous, prolonged contact with skin. May cause sensitisation by skin contact.
Symptoms/injuries after eye contact	: Causes serious eye damage. May cause burns. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Symptoms/injuries after ingestion	: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.
Other information	: Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: No ecological consideration when used according to directions. Do not flush to sewer or allow to enter waterways.
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12.2. Persistence and degradability

Portland Cement	
Persistence and degradability	No data available.

12.3. Bioaccumulative potential

Portland Cement	
Bioaccumulative potential	No data available.

12.4. Mobility in soil

Portland Cement	
Ecology - soil	No data available.

12.5. Other adverse effects

Other adverse effects	: No data available.
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

SECTION 14: Transport information

In accordance with DOT

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Additional information

Other information : No supplementary information available.

SECTION 15: Regulatory information

15.1. US Federal regulations

Quartz (14808-60-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Calcium oxide (1305-78-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Limestone (1317-65-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

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

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Magnesium oxide (1309-48-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Flue dust, portland cement (68475-76-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. US State regulations

Portland Cement()

State or local regulations	This product contains Crystalline Silica, Quartz and may also contain trace amounts of other chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.
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Quartz (14808-60-7)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	No	No	No	No

SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

IARC (I)	International Agency for Research on Cancer.
	1 - Carcinogenic to humans; 2A - Probably carcinogenic to humans; 2B - Possibly carcinogenic to humans; 3 - Not classifiable; 4 - Probably not carcinogenic to humans.
NTP (N)	National Toxicology Program.
	1 - Evidence of Carcinogenicity; 2 - Known Human Carcinogens; 3 - Reasonably anticipated to be Human Carcinogen; 4 - Substances delisted from report on Carcinogens; 5 - Twelfth Report - Items under consideration.

SECTION 16: Other information

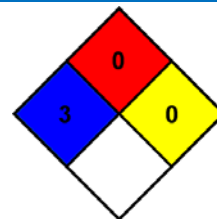
Data sources : SDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

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- NFPA health hazard : 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.
- NFPA fire hazard : 0 - Materials that will not burn.
- NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product