



# Safety Data Sheet

**Material Name:** Portland Cement (ASTM Type I/II, ASTM Type III, ASTM Type V, Block, Plastic, Fast Set, Low Heat of Hydration)

**Synonyms:** Portland Cement; also known as Cement or Hydraulic Cement, Mortar, Class G

## \*\*\* Section 1 - Product and Company Identification \*\*\*

### Manufacturer Information

CALPORTLAND COMPANY  
2025 E. Financial Way  
Glendora, CA 91741  
Phone: 626-852-6200  
[www.calportland.com](http://www.calportland.com)

## \*\*\* Section 2 - Hazards Identification \*\*\*

### GHS Classification:

- Acute Toxicity Oral - Category 4
- Acute Toxicity Dermal - Category 4
- Acute Toxicity Inhalation - Category 3
- Skin Corrosion/Irritation - Category 1B
- Eye Damage - Category 1
- Respiratory Sensitization - Category 1
- Skin Sensitization - Category 1
- Carcinogenicity - Category 1A
- Specific Target Organ Toxicity Repeat Exposure - Category 1

### GHS LABEL ELEMENTS

#### Symbol(s)



#### Signal Word

Danger

#### Hazard Statements

- Harmful if swallowed.
- Harmful in contact with skin.
- Toxic if inhaled.
- Causes severe skin burns and eye damage.
- Causes serious eye damage.
- May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- May cause an allergic skin reaction.
- May cause cancer.
- Causes damage to organs through prolonged or repeated exposure (lungs).

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## Precautionary Statements

### Prevention

Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Contaminated work clothing must not be allowed out of the workplace.  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Do not breathe dust/fume/gas/mist/vapors/spray.  
Use only outdoors or in a well-ventilated area.  
In case of inadequate ventilation wear respiratory protection.

### Response

If swallowed: Rinse mouth. Do NOT induce vomiting. Immediately call a poison center/doctor.  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison center or doctor/physician. Wash contaminated clothing before reuse.  
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor.

### Storage

Store in a well-ventilated place.  
Store in an appropriate container or containment structure.

### Disposal

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

## \* \* \* Section 3 - Composition / Information on Ingredients \* \* \*

CAS #	Component	Percent
65997-15-1	Cement, portland, chemicals	78-95
1317-65-3	Limestone	0-15
13397-24-5	Gypsum (Ca(SO <sub>4</sub> ).2H <sub>2</sub> O)	5-7
14808-60-7	Quartz	0-0.3

## Component Information/Information on Non-Hazardous Components

### General Product Information

Trace Elements: Portland cement is made from materials mined from the earth and is processed using energy provided by fuels. Trace amounts of naturally occurring, potentially harmful chemical might be detected during chemical analysis. For example, Portland cement may contain up to 1.50 % insoluble residue, some of which may be free crystalline silica. Other trace constituents may include calcium oxide, free magnesium oxide, potassium and sodium sulfate compounds, and trace metal compounds.

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## \*\*\* Section 4 - First Aid Measures \*\*\*

### **First Aid: Eyes**

Immediately flush eyes thoroughly with water. Continue flushing eye for at least 15 minutes, including under lids, to remove all particles. Call physician immediately.

### **First Aid: Skin**

Wash skin with cool water and pH-neutral soap or a mild detergent intended for use on skin. Seek medical treatment in all cases of prolonged exposure to wet cement, cement mixtures, liquids from fresh cement products, or prolonged wet skin exposure to the dry cement.

### **First Aid: Ingestion**

Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately.

### **First Aid: Inhalation**

Remove to fresh air. Seek medical help if coughing and other symptoms do not subside. (Inhalation of gross amounts of Portland cement 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**

Firefighters should wear full protective gear.

## \*\*\* Section 6 - Accidental Release Measures \*\*\*

### **Recovery and Neutralization**

Stop the flow of material, if this is without risk.

### **Materials and Methods for Clean-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 material to dry before disposal.

### **Emergency Measures**

Isolate area. Keep unnecessary personnel away.

### **Personal Precautions and Protective Equipment**

Wear appropriate personal protective equipment as described in Section 8.

### **Environmental Precautions**

Do not attempt to wash Portland cement down sewers or storm drains.

### **Prevention of Secondary Hazards**

None

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## \*\*\* Section 7 - Handling and Storage \*\*\*

### Handling Procedures

Avoid prolonged or repeated breathing of dust. Avoid contact with eyes and skin. Promptly remove dusty clothing or clothing which is wet with cement fluids and launder before reuse. Wash thoroughly after exposure to dust or wet cement mixtures.

### Storage Procedures

Store product in a cool, dry, ventilated area. Protect against physical damage and moisture. Keep cement dry until used. Normal temperature and pressures do not affect the material.

### Incompatibilities

Wet Portland cement is alkaline. As such it is incompatible with acids, ammonium salts and aluminum metal.

## \*\*\* Section 8 - Exposure Controls / Personal Protection \*\*\*

### Component Exposure Limits

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

ACGIH: 1 mg/m<sup>3</sup> TWA (particulate matter containing no asbestos and <1% crystalline silica, respirable fraction)  
OSHA: 15 mg/m<sup>3</sup> TWA (total dust); 5 mg/m<sup>3</sup> TWA (respirable fraction)  
NIOSH: 10 mg/m<sup>3</sup> TWA (total dust); 5 mg/m<sup>3</sup> TWA (respirable dust)

#### Limestone (1317-65-3)

OSHA: 15 mg/m<sup>3</sup> TWA (total dust); 5 mg/m<sup>3</sup> TWA (respirable fraction)  
NIOSH: 10 mg/m<sup>3</sup> TWA (total dust); 5 mg/m<sup>3</sup> TWA (respirable dust)

#### Gypsum (Ca(SO<sub>4</sub>).2H<sub>2</sub>O) (13397-24-5)

ACGIH: 10 mg/m<sup>3</sup> TWA (inhalable fraction, listed under Calcium sulfate)  
OSHA: 15 mg/m<sup>3</sup> TWA (total dust); 5 mg/m<sup>3</sup> TWA (respirable fraction)  
NIOSH: 10 mg/m<sup>3</sup> TWA (total dust); 5 mg/m<sup>3</sup> TWA (respirable dust)

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

ACGIH: 0.025 mg/m<sup>3</sup> TWA (respirable fraction)  
NIOSH: 0.05 mg/m<sup>3</sup> TWA (respirable dust)

### Engineering Measures

Avoid actions that cause dust to become airborne. Use local exhaust or general dilution ventilation to control exposure within applicable limits.

### Personal Protective Equipment: Respiratory

Use local or general ventilation to control exposures below applicable exposure limits. NIOSH or MSHA approved particulate filter respirators should be used in the context of respiratory protection program meeting the requirements of the OSHA respiratory protection standard [29 CFR 1910.134] to control exposures when ventilation or other controls are inadequate or discomfort or irritation is experienced. Respirator and/or filter cartridge selection should be based on American National Standards Institute (ANSI) Standards Z88.2 Practices for Respiratory Protection.

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## Personal Protective Equipment: Hands

Where prolonged exposure to unhardened concrete products might occur, wear impervious gloves to eliminate skin contact. Do not rely on barrier creams; barrier creams should not be used in place of gloves. Periodically wash areas contacted by wet cement or its dry ingredients with a pH neutral soap and water. Wash again at the end of the work. If irritation occurs, immediately wash the affected area and seek treatment.

## Personal Protective Equipment: Eyes

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 with Portland cement or fresh cement products.

## Personal Protective Equipment: Skin and Body

Where prolonged exposure to unhardened 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.

### \* \* \* Section 9 - Physical & Chemical Properties \* \* \*

<b>Appearance:</b>	Gray powder.	<b>Odor:</b>	None
<b>Physical State:</b>	Solid	<b>pH:</b>	12-13 (in water)
<b>Vapor Pressure:</b>	Not Applicable	<b>Vapor Density:</b>	Not Applicable
<b>Boiling Point:</b>	Not Applicable	<b>Melting Point:</b>	Not Applicable
<b>Solubility (H<sub>2</sub>O):</b>	Slightly soluble	<b>Specific Gravity:</b>	3.15
<b>Evaporation Rate:</b>	Not Applicable	<b>VOC:</b>	Not Determined
<b>Octanol/H<sub>2</sub>O Coeff.:</b>	Not Determined	<b>Flash Point:</b>	None
<b>Flash Point Method:</b>	None	<b>Upper Flammability Limit (UFL):</b>	None
<b>Lower Flammability Limit (LFL):</b>	None	<b>Burning Rate:</b>	None
<b>Auto Ignition:</b>	Not Combustible		

### \* \* \* Section 10 - Chemical Stability & Reactivity Information \* \* \*

#### Chemical Stability

This is a stable material.

#### Hazardous Reaction Potential

Will not occur.

#### Conditions to Avoid

Unintentional contact with water.

#### Incompatible Products

Wet Portland cement is alkaline. As such it is incompatible with acids, ammonium salts and aluminum metal.

#### Hazardous Decomposition Products

Will not spontaneously occur. Adding water results in hydration and produces (caustic) calcium hydroxide.

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## \*\*\* Section 11 - Toxicological Information \*\*\*

### Acute Toxicity

#### Component Analysis - LD50/LC50

Quartz (14808-60-7)

Oral LD50 Rat 500 mg/kg

#### Potential Health Effects: Skin Corrosion Property/Stimulativeness

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 cement. 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 Portland cement 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.

#### Potential Health Effects: Eye Critical Damage/ Stimulativeness

Exposure to airborne dust during the handling or mixing of the dry ingredients in Portland cement 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 and blindness. Such exposures require immediate first aid (see Section 4) and medical attention to prevent significant damage to the eye.

#### Potential Health Effects: Ingestion

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.

#### Potential Health Effects: Inhalation

Exposure to Portland cement in excess of the applicable TLV or PEL (see section 2) may cause or aggravate other lung conditions. The ingredients in Portland cement may contain trace amounts of crystalline silica. Exposure to these ingredients in excess of the applicable TLV or PEL (see Section 2) may cause or aggravate other lung conditions. Exposure to Portland cement may cause irritation to the moist mucous membranes of the nose, throat, and upper respiratory system. It may also leave unpleasant deposits in the nose.

#### Respiratory Organs Sensitization/Skin Sensitization

May cause allergy or asthma symptoms or breathing difficulties if inhaled. Some individuals may exhibit an allergic response upon exposure to wet concrete. The response may appear in a variety of forms ranging from a mild rash to severe skin ulcers. Persons already sensitized may react to their first contact with the product. Other persons may first experience this effect after years of contact with Portland cement products.

#### Generative Cell Mutagenicity

This product is not reported to have any mutagenic effects.

#### Carcinogenicity

##### A: General Product Information

May cause cancer.

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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## B: Component Carcinogenicity

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

ACGIH: A4 - Not Classifiable as a Human Carcinogen

### Quartz (14808-60-7)

ACGIH: A2 - Suspected Human Carcinogen

NIOSH: potential occupational carcinogen

NTP: Known Human Carcinogen (respirable size) (Select Carcinogen)

IARC: Monograph 100C [2012] (listed under Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources); Monograph 68 [1997] (Group 1 (carcinogenic to humans))

## Reproductive Toxicity

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

## Specified Target Organ General Toxicity: Single Exposure

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

## Specified Target Organ General Toxicity: Repeated Exposure

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

## Aspiration Respiratory Organs Hazard

This product is not reported to have any aspiration hazards.

## \* \* \* Section 12 - Ecological Information \* \* \*

## Ecotoxicity

### A: General Product Information

This product is not reported to have any ecotoxicity effects.

### B: Component Analysis - Ecotoxicity - Aquatic Toxicity

No ecotoxicity data are available for this product's components.

## Persistence/Degradability

No information available for the product.

## Bioaccumulation

No information available for the product.

## Mobility in Soil

No information available for the product.

## \* \* \* Section 13 - Disposal Considerations \* \* \*

## Waste Disposal Instructions

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

## Disposal of Contaminated Containers or Packaging

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

## \* \* \* Section 14 - Transportation Information \* \* \*

## DOT Information

Shipping Name: Not Regulated.

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## \*\*\* Section 15 - Regulatory Information \*\*\*

### Regulatory Information

#### US Federal Regulations

#### Component Analysis

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

#### State Regulations

#### Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Cement, portland, chemicals	65997-15-1	No	Yes	Yes	Yes	Yes	No
Limestone	1317-65-3	No	Yes	Yes	Yes	Yes	No
Gypsum (Ca(SO4).2H2O)	13397-24-5	No	No	Yes	Yes	Yes	No
Quartz	14808-60-7	No	Yes	Yes	Yes	Yes	No

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains chemicals known to the state of California to cause cancer, birth defects, or other reproductive harm.

#### Component Analysis - WHMIS IDL

No components are listed in the WHMIS IDL.

#### Additional Regulatory Information

#### Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Cement, portland, chemicals	65997-15-1	Yes	DSL	EINECS
Limestone	1317-65-3	Yes	NDSL	EINECS
Gypsum (Ca(SO4).2H2O)	13397-24-5	No	DSL	No
Quartz	14808-60-7	Yes	DSL	EINECS



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\* \* \* Section 16 - Other Information \* \* \*

Hazardous Material Information System (HMIS):	<b>Health</b>	<b>1</b>
	<b>Flammability</b>	<b>0</b>
	<b>Physical Hazard</b>	<b>0</b>
	<b>Personal Protection</b>	<b>B</b>

NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

Protective Equipment: Safety glasses, gloves

## Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.

## Literature References

None

## Other Information

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