



MATERIAL SAFETY DATA SHEET

All cement products sold to the Buyer are subject to the terms and conditions on page 10.

SECTION 1 - IDENTIFICATION

Product: Portland Cement
Manufacturer: GCC of America.
130 Rampart Way, Suite 205
Denver, Colorado 80230
Emergency Telephone No: (303) 739-5900 **Date:** November 19, 2009

Chemical Family

Calcium compounds. Calcium silicate compounds and other calcium compounds containing iron and aluminum make up the majority of this product.
Major compounds are:

3CaO.SiO ₂	Tricalcium silicate (CAS# 12168-85-3)
2CaO.SiO ₂	Dicalcium silicate (CAS# 10034-77-2)
3CaO.Al ₂ O ₃	Tricalcium aluminate (CAS# 12042-78-3)
4CaO.Al ₂ O ₃ .Fe ₂ O ₃	Tetracalcium aluminoferrite (CAS# 12068-35-8)
CaSO ₄ .2H ₂ O	Calcium sulfate dihydrate or Gypsum (CAS# 13397-24-5)

Chemical name and synonyms

Portland Cement
Oil Well Cement

Formula

This product consists of finely ground portland cement clinker mixed with a small amount of gypsum.

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SECTION 2 - COMPONENTS

Hazardous ingredients

Portland cement (CAS# 65997-15-1) - approximately 60% by weight
ACGIH TLV-TWA (1995-1996) = 10 mg total dust/m³
OSHA PEL (8-hour TWA) = 50 million particles/ft³

Gypsum (CAS# 7778-18-9) - approximately 3-5% by weight
ACGIH TLV-TWA(1995-1996) = 10 mg total dust/m³
OSHA PEL (8-hour TWA) = 10 mg total dust/m³
OSHA PEL (8-hour TWA) = 5 mg respirable dust/m³

Other ingredients - trace elements

CaCO₃ plus small amounts of CaO, MgO, K₂SO₄ and Na₂SO₄ may be present. GCCA's cement is made from materials mined from the earth and is processed using energy provided by fossil fuels. Trace elements of naturally occurring chemicals might be detected during analysis.

SECTION 3 - HAZARDS IDENTIFICATION

Emergency Overview

Portland cement is a light gray powder that poses little immediate hazard. A single short term exposure to the dry powder is not likely to cause serious harm. However, exposure of sufficient duration to wet portland cement can cause serious, potentially irreversible tissue (skin or eye) destruction in the form of chemical (caustic) burns, including third degree burns. The same type of tissue destruction can occur if wet or moist areas of the body are exposed for sufficient duration to portland cement.

Potential Health Effects

* **Relevant Routes of Exposure:**

Eye contact, skin contact, inhalation, and ingestion.

* **Effects resulting from eye contact:**

Exposure to airborne dust may cause immediate or delayed irritation or inflammation.

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Eye contact by larger amounts of dry powder or splashes of wet portland cement 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.

* **Effects resulting from skin contact:**

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 to dry portland cement may cause drying of the skin with consequent mild irritation or more significant effects attributable to aggravation of other conditions. Dry portland cement contacting wet skin or exposure to moist or wet portland cement 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 burns. Some individuals may exhibit an allergic response upon exposure to portland cement, possibly due to trace amounts of chromium. The response may appear in a variety of forms ranging from mild rash to severe skin ulcers. Persons already sensitized may react to their first contact with the product. Other persons may first experience this affect after years of contact with portland cement products.

* **Effects resulting from inhalation:**

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 deposit in the nose.

* **Effects resulting from ingestion:**

Although small quantities of dust are not known to be harmful, ill effects are possible if larger quantities are consumed. Portland cement should not be eaten.

* **Carcinogenic potential:**

Portland cement is not listed as a carcinogen by NTP, OSHA or IARC. It may, however, contain trace amounts of substances listed as carcinogens by these organizations.

* **Medical conditions which may be aggravated by inhalation or dermal exposure:**

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Pre-existing upper respiratory and lung diseases.

Unusual (hyper) sensitivity to hexavalent chromium (chromium ⁺⁶) salts.

SECTION 4 - FIRST AID

Eyes

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

Skin

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 cement, cement mixtures, liquids from fresh cement products, or prolonged wet skin exposure to dry cement.

Inhalation of Airborne Dust

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.")

Ingestion

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

SECTION 5 - FIRE & EXPLOSION DATA

Flash point None
Lower Explosive Limit..... None
Upper Explosive Limit..... None
Auto ignition temperature..... Not combustible
Extinguishing media Not combustible
Special fire fighting procedures None.

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Although portland cement poses no fire-related hazards, a self-contained breathing apparatus is recommended to limit exposure to combustion products when fighting any fire.

Hazardous combustion products.....None

Unusual fire and explosion hazards.....None

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Collect dry material using a scoop. Avoid actions that cause dust to become airborne. Avoid inhalation of dust and contact with skin. Wear appropriate personal protective equipment as described in Section 8.

Scrape up wet material and place in an appropriate container. Allow the material to dry before disposal. Do not attempt to wash portland cement down drains.

Dispose of waste material according to local, state and federal regulations.

SECTION 7 - HANDLING AND STORAGE

Keep portland cement dry until used. Normal temperatures and pressures do not affect the material.

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 or fluids.

SECTION 8 - EXPOSURE CONTROLS - PERSONAL PROTECTION

Skin protection

Prevention is essential to avoiding potentially severe skin injury. Avoid contact with unhardened (wet) portland cement products. If contact occurs, promptly wash affected area with soap and water. Where prolonged exposure to unhardened portland cement products might occur, wear impervious clothing and gloves to eliminate skin contact. Where required, wear boots that are impervious to water to eliminate foot or ankle exposure.

Do not use barrier creams in place of gloves.

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Periodically wash areas contacted by dry portland cement or by wet cement or concrete fluids with a pH neutral soap. Wash again at the end of the work. If irritation occurs, immediately wash the affected area and seek treatment. If clothing becomes saturated with wet concrete, it should be removed and replaced with dry clothing.

Respiratory protection

Avoid actions that cause dust to become airborne. Use local or general ventilation to stay below exposure limits.

Use NIOSH/MSHA-approved (under 30 CFR 11) or NIOSH-approved (under 42 CFR 84) respirators in poorly ventilated areas, if an applicable exposure limit is exceeded, or when dust causes discomfort or irritation. (Advisory: Respirators and filters purchased after July 10, 1998, must be certified under 42 CFR 84.)

Ventilation

Use local exhaust or general dilution ventilation to control exposure within applicable limits.

Eye protection

When engaged in activities where cement dust or wet cement or concrete could contact the eye, wear approved safety glasses with side shields or goggles. In extremely dusty environments and unpredictable environments, wear unvented or indirectly vented approved goggles to avoid eye irritation or injury. Contact lenses should not be worn when working with portland cement or fresh cement products.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance.....	Gray or white powder
Odor.....	No distinct odor
Physical state.....	Solid (powder)
pH (in water) (ASTM D 1293-5).....	12 to 13
Solubility in water.....	Slightly soluble (0.1 to 1.0%)
Vapor pressure.....	Not applicable

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Vapor density.....Not applicable
Boiling point.....Not applicable (i.e., >1000°C)
Melting point.....Not applicable
Specific gravity (H₂O = 1.0).....3.15
Evaporation rate.....Not applicable

SECTION 10 - STABILITY AND REACTIVITY

Stability	Stable.
Conditions to avoid	Unintentional contact with water.
Incompatibility	Wet portland cement is alkaline. As such it is incompatible with acids, ammonium salts and aluminum metal.
Hazardous decomposition	Will not spontaneously occur. Adding water results in hydration and produces (caustic) calcium hydroxide.
Hazardous polymerization	Will not occur.

SECTION 11 - TOXICOLOGICAL INFORMATION

For a description of available, more detailed toxicological information, contact supplier or manufacturer.

SECTION - 12 ECOLOGICAL INFORMATION

Ecotoxicity

No recognized unusual toxicity to plants or animals.

Relevant physical and chemical properties

(See Sections 9 and 10.)

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SECTION 13 - DISPOSAL

Dispose of waste material according to local, state and federal regulations. (Since portland cement is stable, uncontaminated material may be saved for future use.)

Dispose of bags in an approved landfill or incinerator.

SECTION 14 - TRANSPORTATION DATA

Hazardous materials description/proper shipping name

Portland cement is not hazardous under U.S. Department of Transportation (DOT) regulations.

Hazard class	Not applicable
Identification number	Not applicable
Required label text	Not applicable
Hazardous substances/reortable quantities (RO)	Not applicable

SECTION 15 - OTHER REGULATORY INFORMATION

Status under USDOL-OSHA Hazard Communications Rule, 29 CFR 1910.1200

Portland cement is considered a "hazardous chemical" under this regulation, and should be part of any communication program.

Status under CERCLA/Superfund, 40 CFR 117 and 302

Not listed.

Hazard Category under SARA (Title III), Section 311 and 312

Portland cement qualifies as a "hazardous substance" with delayed health effects.

Status under SARA (Title III), Section 313

Not subject to reporting requirements under Section 313.

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Status under TSCA (as of May 1997)

Some substances in portland cement are on the TSCA inventory list.

Status under the Federal Hazardous Substances Act

Portland cement is a "hazardous substance" subject to statutes promulgated under the act.

Status under California Proposition 65

This product contains chemicals (trace metals) known to the State of California to cause cancer, birth defects or other reproductive harm. California law requires the manufacturer to give the above warning in the absence of definitive testing to prove that the defined risks do not exist.

Status under Canadian Environmental Protection Act

Not listed.

Status under WHMIS

Portland cement is considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulation (Class E - Corrosive Material) and is therefore subject to the labeling and MSDS requirements of the Workplace Hazardous Materials System (WHMIS).

SECTION - 16 OTHER INFORMATION

While the information provided in this material safety data sheet is believed to provide a useful summary of the hazards of portland cement as it is commonly used, the sheet cannot anticipate and provide all of the information that might be needed in every situation. In particular, the furnished data does not address hazards that may be posed by other materials mixed with portland cement to produce portland cement products. Users should review other relevant material safety data sheets before working with portland cement or other portland cement products.

The information provided herein is believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information to comply with all laws and procedures applicable to the safe handling and use of product and to determine the suitability of the product for its intended use.

GCC of AMERICA

TERMS AND CONDITIONS OF SALE

In consideration of GCC of America, Inc. (GCCA) maintaining a commercial charge account, I agree to the following terms and conditions regarding all purchases made by me or anyone authorized by me.

- Acceptance/Guaranty:** Use of the charge account will constitute acceptance of this agreement. If this is a joint account, each party will be bound by this agreement. I (we), the undersigned, personally and unconditionally guarantee payment of all purchases ordered by me, or persons authorized to purchase on this account, whether existing or hereafter incurred, whether on open account or evidenced by any instrument or document. This guaranty shall be absolute, continuing and unlimited. This guaranty shall not be affected by any acceptance or any payment of the indebtedness, in whole or in part, or by any extension of the time, manner, form or amount of payment. This is a guarantee of payment and not of collection, and the undersign waives notice of acceptance, nonpayment, and protest with respect to the obligation covered hereunder.
- Payment/Finance Charges:** I understand that all charges made during a month are due in full by the end of the following month. To receive a discount of five cents per cwt in bulk, or five cents per sack, cement payments are due by the tenth of the month following purchases. Postmark date by the United States Post Office will govern payment date. No discounts will be allowed if there are any outstanding past due balances. If I pay the new balance in full by the end of the following month, no finance charge will be imposed on my account. If I do not pay the new balance by the end of the following month, GCCA will impose a finance charge at the periodic rate of 1 ½ percent per month on the past due unpaid balance. The finance charge will continue to be assessed on all past due balances until they are paid. The 1 ½ percent per month equates to an annual percentage rate of 18 percent.
- Mechanic Lien/Security Interest:** If the goods or services charged to my account are used in connection with the alteration, repair or construction of any building, or for any other improvement of real estate, under State law, GCCA has the right to obtain a mechanic's lien upon the real estate to secure payment. Further, I grant GCCA a purchase money security in all merchandise, purchased by me or anyone authorized by me under this agreement, for as long as a balance remains outstanding with respect to such goods.
- Change in Terms:** Upon prior notice to me, in accordance with local state law, GCCA may change the terms of this agreement and the new terms will apply to purchases made after the effective date.
- Error or Discrepancies:** If I believe my monthly statement contains an error, or I need more information about a transaction, I understand that I must write GCCA, (on a separate sheet of paper) at the above address as soon as possible, but not later than ten (10) days after the end of any month. GCCA must be contacted not later than ten (10) days after the end of the month after the first statement on which the error or problem appears. Telephoning GCCA will not preserve my rights. The letter is to contain all particulars about the error, including the customer's name, address, phone number and the name of the person filing the notice of error.
- Termination of Agreement:** GCCA reserves the right to terminate at any time, with or without cause, my right to make further purchases under this account. Further, GCCA has the right, if I become delinquent in payments on my account, to turn it over to a collection agency, or attorney at law, for collection. I agree to pay reasonable collection fees, attorney fees and other costs incurred in collection.
- Specifications:** All cement products sold or shipped under this agreement are warranted to conform to the present standard specifications of the American Society for Testing and Materials, section C-150. There are no other warranties, written, oral, express, implied or statutory and there are no statutory or implied warranties of merchantability or fitness made in respect thereof. There specifically is no warranty for fitness for a particular purpose or use. Having no control over the use of cement, the Seller will not, therefore, guarantee finished work, nor shall the Seller be responsible for the condition of cement after delivery to the Buyer. Any charges incident to inspections or tests made by, or on behalf of, Buyer to determine compliance with specification, shall be paid by Buyer.
- Liability for Delay:** Seller shall not be liable to Buyer for any delays in manufacturing, shipping, or delivering said cement, caused by earthquake, flood, tornado or other events of nature, fire, strikes, lockouts, labor disputes, plant failure or equipment and machinery breakdown, accidents, war, insurrection, riot, civil commotion, inability to secure rail cars, trailers, or trucks, fuel or other materials, governmental interference or regulation, delays in transportation, unavailability of cement for any reason, or market factors beyond Seller's control. In the event a shortage of the supply of cement occurs for any reason or in the event cement is unavailable for any reason, Seller shall have the right to apportion among its customers, including Buyer, the amount of such cement as Seller may determine.
- Claims:** Any or all claims for loss or damage on the part of Buyer are limited to actual damages of Buyer, not to exceed the purchase price of the product purchased herein. This shall be the exclusive remedy of Buyer. Buyer waives all rights to claims for damages against Seller in excess of those provided for in this contract, including, but not limited to, any and all rights, claims, or damages which the Buyer may have against Seller for special, incidental, consequential, indirect loss, or punitive damages from any default, breach or performance of this agreement by Seller, or Buyer's use of Seller's product sold herein. All such special, incidental, consequential, indirect loss, or punitive damages waived by Buyer include, but are not limited to, any and all rights, claims, or damages which Buyer may have against Seller for back charges, labor costs, cost of removal, replacement, testing or installation, loss of efficiency, loss of profits or revenues, loss of use of the products sold herein, damage to associated products, lateness or delays in delivery, unavailability of products, cost of capital, cost of substitute products, facilities or service, downtime, or claims from Buyer's customers or other parties.
- Title, Risk of Loss, Charges:** Buyer shall not sell cement bought from Seller unless Buyer is an agent of Seller authorized to do so. Title or ownership of cement sold to Buyer shall remain in Seller and only pass to Buyer when the cement reaches the destination stated on the bill of lading. Buyer is liable for any and all loss of or damage to, the cement or other persons or property until the cement is delivered to the destination stated on the bill of lading, unless Seller has prepaid the freight charges for the cement.
- Applicable Law and Forum:** Buyer agrees that the purchase of cement from Seller shall be governed by the laws of the state in which product was purchased, and any litigation arising between Buyer and Seller concerning the purchase of said cement shall be venued in the county and state where the product was purchased.

KEEP OUT OF REACH OF CHILDREN

CAUTION: Freshly mixed cement, mortar, concrete or grout may cause skin injury. Avoid contact with skin. Skin exposed to cement, mortar, concrete, grout or other cement mixture is to be washed immediately with water. If any cement or cement mixture gets into the eyes, rinse immediately and repeatedly with water and get immediate medical attention.