

# SECTION I. IDENTIFICATION

Product Identifier Gray Portland Cement

Other Means of Identification Cement, Hydraulic Cement, Ordinary Portland Cement

Gray Portland Cement Type I/II

Chemical Name Calcium compounds, calcium silicate compounds, and other calcium compounds containing iron and aluminum

make up most this product.

Relevant Uses Building materials, construction application, a basic ingredient in concrete.

Supplier Name SESCO Cement Corp.

Address 7300 Wingate St.

Houston, TX 77011

Technical Services: (832) 920-9371

Emergency Telephone Number CHEMTREC: 1-800-424-9300

#### SECTION II. HAZARDS IDENTIFICATION

OSHA/HCS Status This material is considered hazardous by the OSHA Hazard Communication Standard (29

CFR 1910.1200).

Category Classification(s) Skin Corrosion/Irritation - Category 1

Eye Damage - Category 1 Skin Sensitization - Category 1

Carcinogenicity/Inhalation - Category 1

Single Target Organ Toxicity (Repeated Exposure) - Category 2

## **GHS Label Elements:**

Hazard Pictograms



GHS07



GHS05



GHS08

Signal Word Danger

Hazard Statements Causes severe skin burns and eye damage

May cause an allergic skin reaction May cause cancer (inhalation, dermal).

Causes damage to lungs, kidneys and autoimmune systemm through prolonged or repeated exposure by

inhalation



## **Precautionary Statements:**

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and

understood. Do not breathe dust.

Wash clothing, hands, forearms and face thoroughly after handling. Contaminated work clothing must not be

allowed out of the workplace.

Wear eye protection, protective clothing, protective gloves

Response If swallowed: rinse mouth. Do NOT induce vomiting

If on skin: Wash with plenty of soap and water

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water

If inhaled: Remove person to fresh air and keep comfortable for breathing

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 advice/attention

Immediately call a doctor or POISON CENTER Get medical advice/attention if you feel unwell Specific treatment (see Section 4 this label)

If skin irritation or rash occurs: Get medical advice/attention
Take off contaminated clothing and wash it before reuse

Wash contaminated clothing before reuse

Storage Keep container tightly closed in a dry and well-ventilated area.

Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other Hazards None known.

# SECTION III. COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Mixture Gray Portland Cement

Chemical Name Calcium compounds, calcium silicate compounds, and other calcium compounds containing iron and aluminum

make up most this product.

Ingredient Name	% Content	CAS#
Portland Cement Clinker	93.5 - 96.0 %	65997-15-1
Gypsum	4 - 6.5 %	7778-18-9
Quartz	> 0.1 %	14808-60-7
Other (CaO, MgO, K2SO4, Na2SO4, Chromium and Nickel compounds)	Trace Amounts	

Any concentration shown as a range is to protect confidentiality or is due to process variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

See Section 8 for Occupational Exposure Limits.



#### SECTION IV. FIRST AID MEASURES

## **Description of Necessary First Aid Measures:**

Eye Contact Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of wa-

ter, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse

for at least 20 minutes. Chemical burns must be treated promptly by a physician.

Inhalation Calcium compounds, calcium silicate compounds, and other calcium compounds containing iron and aluminum

make up most this product.

Skin Contact Get medical attention immediately. Heavy exposure to Portland cement dust, wet concrete or associated water

requires prompt attention. Quickly remove contaminated clothing, shoes, and leather goods such as watchbands and belts. Quickly and gently blot or brush away excess Portland cement. Immediately wash thoroughly with lukewarm, gently flowing water and non-abrasive pH neutral soap. Seek medical attention for rashes, burns, irritation, dermatitis and prolonged unprotected exposures to wet cement, cement mixtures or liquids from wet cement. Burns should be treated as caustic burns. Portland cement causes skin burns with little warning. Discomfort or pain cannot be relied upon to alert a person to a serious injury. You may not feel pain or the severity of the burn until hours after the exposure. Chemical burns must be treated promptly by a physician. In

the event of any complaints or symptoms, avoid further exposure.

Ingestion Get medical attention immediately. Call a poison center or physician. Have victim rinse mouth thoroughly with

water. DO NOT INDUCE VOMITING unless directed to do so by medical personnel. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Have victim drink 60 to 240 mL (2 to 8 oz.) of water. Stop giving water if the exposed person feels sick as vomiting may be dangerous. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get

medical attention immediately. Maintain an open airway.

# Most Important Symptoms/Effects, Acute and Delayed Potential Acute Health Effects

Eye Contact Causes serious eye damage.

Inhalation May cause respiratory irritation.

Skin Contact Causes severe burns. May cause an allergic skin reaction.

Ingestion May cause burns to mouth, throat and stomach.

## Over-Exposure Signs/Symptoms

Eye Contact Adverse symptoms may include the following: pain, watering and redness.

Inhalation Adverse symptoms may include the following: respiratory tract irritation and coughing.

Skin Contact Adverse symptoms may include the following: pain or irritation, redness and blistering may occur, skin burns,

ulceration and necrosis may occur.

Ingestion Adverse symptoms may include the following: stomach pains.

#### Indication of Immediate Medical Attention and Special Treatment Needed, If Necessary

Notes to Physician Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested

or inhaled.

Specific Treatments Not applicable.

Protection of First-Aiders No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the

person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water

before removing it, or wear gloves.



#### SECTION V. FIRE-FIGHTING MEASURES

#### **Extinguishing Media**

Unsuitable Extinguishing Media DO NOT use water jet or water-based fire extinguishers.

Hazardous Thermal Decompositionw

**Products** 

 $Decomposition\ products\ may\ include\ the\ following\ materials:\ carbon\ dioxide,\ carbon\ monoxide,\ sulfur\ oxides$ 

and metal oxide/oxides products.

Specific Hazards Arising from The Chemical Non-flammable. No specific fire or explosion hazard.

Special Protective Actions for Firefighters

- Evacuate area.
- Move containers from fire area if this can be done without risk.
- DO NOT allow material to come in contact with waterways, as product reacts with water and becomes hard within 1 to 6 hours.
- Hardened material may clog sewers and waterways.
- Fight fire with normal precautions from a reasonable distance.

Special Protective Equipment for Firefighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

See Section 9 for fire properties of this chemical including flash point, auto-ignition temperature, and explosive limits

## SECTION VI. ACCIDENTAL RELEASE MEASURES

## Personal Precautions, Protective Equipment and Emergency Procedures:

Personnel Precautions No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas.

Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put

on appropriate personal protective equipment (PPE).

Protective Equipment/Clothing For personal protective clothing requirements, please see Section 8.

Environmental Precautions Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the

relevant authorities if reportable thresholds have entered the environment, including waterways, soil or air.

 $\label{thm:materials} \mbox{Materials can enter waterways through drainage systems.}$ 

## Methods and Materials for Containment and Cleaning Up:

Dry Spills 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.

Wet Spills Scrape up wet material and place in an appropriate container. Allow the material to "dry" before disposal.

Disposal Do not attempt to wash Portland cement down drains. Dispose of waste material according to local, state and

federal regulations. See Section 1 for emergency contact information and Section 13 for waste disposal.



#### SECTION VII. HANDLING AND STORAGE

#### Precautions for Safe Handling:

Protective Measures

Put on appropriate PPE (see **Section 8**). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure by obtaining and following special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe dust. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material and keep the container tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on General Occupational Hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas.

Conditions for Safe Storage, Including Any Incompatibilities

A key to using the product safely requires the user to recognize that Portland cement reacts chemically with water to produce calcium hydroxide which can cause severe chemical burns. Every attempt should be made to avoid skin and eye contact with Portland cement. Do not get Portland cement inside boots, shoes or gloves. Do not allow wet, saturated clothing to remain against the skin. Promptly remove clothing and shoes that are dusty or wet with cement mixtures. Launder/clean clothing and shoes before reuse. Do not enter a confined space that stores or contains Portland cement unless appropriate procedures and protection are available. Portland cement can build up or adhere to the walls of a confined space and then release or fall suddenly (engulfment). Keep away from food, drink and animal feeding stuffs. Keep out of the reach of children.

## SECTION VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

## **Occupational Exposure Limits**

Ingredient Name	Agency/Standard	Exposure Limit	
Portland Cement	OSHA PEL (USA, 6/2010)	5 mg/m³ 8 hour TWA (respirable fraction) 15 mg/m³ 8 hour TWA (total)	
	ACGIH TLV (United States, 3/2012)	1 mg/m³ 8 hour TWA (respirable fraction)	
	NIOSH REL (United States, 6/2009)	5 mg/m³ 10 hour TWA (respirable fraction) 10 mg/m³ 10 hour TWA (total)	
Gypsum (Calcium Sulfate) (Ca(SO <sub>4</sub> ).2H <sub>2</sub> O)	OSHA PEL Z-1 (United States, 2/2006)	5 mg/m³ 8 hour TWA (respirable fraction) 15 mg/m³ 8 hour TWA (total dust)	
	ACGIH TLV (United States, 3/2012)	10 mg/m³ 8 hour TWA (respirable fraction)	
	NIOSH REL (United States, 6/2009)	5 mg/m³ 10 hour TWA (respirable fraction) 10 mg/m³ 10 hour TWA (total)	
Magnesium Oxide (MgO)	OSHA PEL (USA, 6/2010)	15 mg/m³ 8 hour TWA (total dust)	
	ACGIH TLV (United States, 3/2012)	10 mg/m³ 8 hour TWA (respirable fraction)	
Respirable Quartz (Crystalline Silica) (SiO <sub>2</sub> )	OSHA PEL (United States, 9/2017)	0.05 mg/m³ 8 hour TWA (total dust)	
	ACGIH TLV (United States, 3/2012)	0.025 mg/m³ 8 hour TWA (respirable fraction)	
	NIOSH REL (United States, 6/2009)	0.05 mg/m³ 10 hour TWA (total dust)	

## Precautions for Safe Handling:

Appropriate Engineering Controls

Use only with adequate ventilation. If user operations generate dust, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.



**Environmental Exposure Controls** 

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

# Personal Protective Equipment (PPE)









Respiratory Protection

Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product, and assigned protection factor of the selected respirator.

Eye/Face Protection

To prevent eye contact, wear safety glasses with side shields, safety goggles or face shields when handling dust or wet cement. Wearing contact lenses when working with cement is not recommended.

Hand Protection

Use impervious, waterproof, abrasion and alkali-resistant gloves. Do not rely on barrier creams in place of impervious gloves. Do not get Portland cement inside gloves.

Additional Skin Protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved. Footwear and other gear to protect the skin should be approved by a specialist before handling this product.

**Body Protection** 

Use impervious, waterproof, abrasion and alkali-resistant boots and protective long-sleeved and longlegged clothing to protect the skin from contact with wet Portland cement. To reduce foot and ankle exposure, wear impervious boots that are high enough to prevent Portland cement from getting inside them. Do not get Portland cement inside boots, shoes, or gloves. Remove clothing and protective equipment that becomes saturated with cement and immediately wash exposed areas of the body.

**Hygiene Measures** 

Clean water should always be readily available for skin and (emergency) eye washing. Periodically wash areas contacted by Portland cement with a pH neutral soap and clean, uncontaminated water. If clothing becomes saturated with Portland cement, garments should be removed and replaced with clean, dry clothing.

## SECTION IX. PHYSICAL AND CHEMICAL PROPERTIES

Physical Properties		Chemical Properties	
Appearance	Gray powder	pH Level (in Water)	12-13
Physical State	Solid (powder)	Solubility in Water	0.1 - 1 %
Odor	No distinct odor	Boiling Point	> 1000° C (1832° F)
Odor Threshold	N/A	Auto-Ignition Temperature	N/A
Melting Point	N/A	Decomposition Temp.	Not available
Viscosity	N/A	Flash Point	Not combustible
Vapor Pressure	N/A	Burning Time	N/A
Vapor Density	N/A	Flammability	Not flammable
Specific Gravity (H <sub>2</sub> 0 = 1.0)	3.15	Evaporation Rate	N/A

# SECTION X. STABILITY AND REACTIVITY

Protective Measures Reacts slowly with water forming hydrated compounds, releasing heat and producing a strong alkaline solution

until reaction is substantially complete.

Chemical Stability The product is stable.

Hazardous Reactions Under normal conditions of storage and use, hazardous reactions should not occur.

Conditions to Avoid Contact with incompatible materials, unintentional contact with moisture.



Incompatible Materials

Reactive or incompatible with the following materials: oxidizing materials, acids, aluminum and ammonium salt. Portland cement is alkaline and will react with acids to produce a violent, heat-generating reaction. Toxic gases or vapors may be given off depending on the acid involved. Reacts with acids, aluminum metals and ammonium salts. Aluminum powder and other alkali and alkaline earth elements will react in wet mortar or concrete, releasing hydrogen gas. Limestone ignites on contact with fluorine and is incompatible with acids, aluminum, ammonium salts, and magnesium. Silica reacts violently with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride yielding possible fire and/or explosions. Silicates dissolve readily in hydrofluoric acid producing a corrosive and toxic silicon tetrafluoride gas.

Hazardous Decomposition Products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

#### SECTION XI. TOXICOLOGICAL INFORMATION

## Health Effects Based on Route of Exposure

Ingredient Name	Route of Exposure	Known Chronic/Acute Effects	
Portland Cement	Eye Contact	Acute: moderate eye irritation to chemical burns and blindness when directly contacted with larger amounts	
	Chronic: Chemical burns.  Acute: drying of skin, mild irritation (dry) thickening, cracking or fissuring of the skin (wet Allergies: Dermatitis induced by alkaline resulting toms ranging from mild rashes to severe skin ul		
	Ingestion	Acute: Small amounts (a tablespoonful) swallowed during normal handling operations are not likely to cause injury. Ingestion of large amounts may cause gastrointestinal irritation and blockage, and alkali burns of mouth, throat and stomach	
	Inhalation	Chronic/Acute: Dust may irritate nose, throat, mucous membranes and respiratory tract	
Quartz (Crystalline Silica) (SiO <sub>2</sub> )  Inhalation  Lu 19		Silicosis (lung disease). Chronic exposure to crystalline silica dust above the occupational exposure limits (See Section 8) increases the risk of developing Silicosis. This disease is characterized by lung lesions (small benign mass in lungs). Symptoms include shortness of breath, coughing, wheezing and diminished chest expansion/lung volume.  Lung Cancer. In accordance with OSHA's revision to standard 1926.1153 and as evidenced by studies and reports conducted by IARC and NTP, regular, repeated exposure to respirable crystalline silica is heavily linked to cases of lung cancer.	

## SECTION XII. ECOLOGICAL INFORMATION

No data available for this product.

## SECTION XIII. DISPOSAL INFORMATION

Disposal Recommendations

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any byproducts should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Untreated waste should not be released to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe manner. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff, and contact with soil, waterways, drains and sewers.



#### SECTION XIV. TRANSPORTATION DATA

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

Placard Required N/A

Label Required Label as required by the OSHA Hazard Communication standard {29 CFR 1910.1200(f)}, and applicable state

and local regulations.

Special Precautions for User Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that

persons transporting the product know what to do in the event of an accident or spillage

#### SECTION XV. REGULATORY INFORMATION

OSHA Crystalline Silica is not listed as a carcinogen. Product may contain trace amounts of hexavalent chromium

[Cr(VI)] and certain chromium compounds which are listed in the NTP and IARC lists of carcinogens.

SARA Title III: Section 311, 312 Immediate health hazard and delayed health hazard.

Crystalline silica (quartz), Limestone (CaCO3) and Portland Cement appear on the EPA TSCA inventory under the **TSCA** 

CAS No. 14808-60-7, 1317-65-3 (471-34-1) and 65997-15-1, respectively.

**RCRA** The product is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its

regulations, 40 CFR §261 et seq.

**CERCLA** The product is not classified as a hazardous substance under regulations of the Comprehensive Environmental

Response, Compensation and Liability Act (CERCLA), 40 CFR §302.4.

EPCRA (Emergency Planning and

Crystalline silica (quartz) is not an extremely hazardous substance under regulations of the Emergency Planning Community Right to Know Act) and Community Right to Know Act, 40 CFR Part 355, Appendices A and B and the product is not a toxic chemical

subject to the requirements of Section 313.

Clean Air Act Crystalline silica (quartz) mined and processed by Sesco Cement was not processed with or does not contain

any Class I or Class II ozone depleting substances.

FDA Silica is included in the list of substances that may be included in coatings used in food contact surfaces. 21

CFR \$175.300(b)(3).(The FDA standard primarily applies to products containing silica used in the coatings of

food contact surfaces).

Respirable crystalline silica is classified as a substance known to the state of California to be a carcinogen. California Proposition 65

Cr(VI) is classified as substances known to the state of California to cause cancer and cause reproductive

toxicity.

Massachusetts Toxic Use Reduction Act Respirable crystalline silica is considered toxic per the Massachusetts Toxic Use Reduction Act when used in

abrasive blasting and molding.

Pennsylvania Worker and Community Right

to Know Act

Quartz is considered hazardous for purposes of the Act, but it is not a special hazardous substance or an envi-

ronmental hazardous substance.



#### SECTION XVI. OTHER INFORMATION

## **Definitions of Acronyms/Abbreviations**

ACGIH American Conference of Governmental Industrial Hygienists

CAS Chemical Abstracts Service

CERCLA Comprehensive Environmental Response, Compensation and Liability Act

CFR US Code of Federal Regulations
EPA Environmental Protection Agency

EPCRA Emergency Planning and Community Right to Know Act

DOT Department of Transportation
FDA Food and Drug Administration
GHS Globally Harmonized System

IARC International Agency for Research on Cancer

NIOSH National Institute for Occupational Safety and Health

NIOSH REL NIOSH Recommended Exposure Limit

NTP National Toxicology Program

OSHA Occupational Safety and Health Administration, US Department of Health and Human Services

OSHA PEL OSHA Permissible Exposure Limit

RCRA Resource Conservation and Recovery Act

SARA Title III of the Superfund Amendments and Reauthorization Act, 1986

SDS Safety Data Sheet
TLV Threshold Limit Value
TSCA Toxic Substance Control Act
TWA Time-Weighted Average

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.

3 0

User's Responsibility

The OSHA Hazard Communication Standard 29 CFR 1910.1200 requires that this SDS be made available to your

 $employees \ who \ handle \ or \ may \ be \ exposed \ to \ this \ product. \ Educate \ and \ train \ your \ employees \ regarding \ applicable$ 

precautions. Instruct your employees to handle this product properly.

Disclaimer The information contained in this document applies to this specific material as supplied and SESCO believes that the

information contained in this SDS is accurate. The suggested precautions and recommendations are based on recognized good work practices and experience as of the date of publication. They are not necessarily all-inclusive or fully adequate in every circumstance as not all use circumstances can be anticipated. It may not be valid for this material if it is used in combination with other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for one's own particular use. Since the actual use of the product described herein is beyond our control, SESCO, assumes no liability arising out of the use of the product by others. Appropriate warnings and safe handling procedures should be provided to handlers and users. Also, the suggestions should not be confused with nor followed in violation of applicable laws, regulation, rules or insurance requirement. However, product must not

be used in a manner which could result in harm.

More Information An electronic version of this SDS is available at www.sescocement.us. More information on the effects of crystalline

silica exposure may be obtained from OSHA (phone number: 1-800-321-OSHA; website: http://www.osha.gov) or from

NIOSH (phone number: 1-800-35-NIOSH; website: http://www.cdc.gov/niosh).

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