



LEHIGH SOUTHWEST CEMENT COMPANY

MATERIAL SAFETY DATA SHEET

Product Name: ALLCEM CEMENT

SECTION 1 - IDENTIFICATION

Supplier:

Name: Lehigh Southwest Cement Company
 Address: 2300 Clayton Rd, Suite 300
 Concord, CA 94520
 Telephone: 925 521 3600

Chemical Name and Synonyms:

Granulated Blast-Furnace Slag Cement, Iron Slag Cement, Granular Pig Iron Slag Cement, Granular Water Granulated Slag Cement, Water Granulated Blast-Furnace Slag Cement

Emergency Contact Information

Health and Transport: (610) 926-1024

SECTION 2 - COMPONENTS

Component Name	%	CAS No.	Component Name	EXPOSURE LIMITS	
				OSHA PEL TWA	ACGIH TLV TWA
Amorphous Silica, Hydrated	30 - 45	1305-78-8	Amorphous Silica, Hydrated		
Calcium Compounds	30 - 45	various	(Total Dust)	6 mg/m ³	10 mg/m ³
Magnesium Compounds	8 - 15	various	Calcium Oxide	5 mg/m ³	2 mg/m ³
Aluminum Compounds	5 - 15	various	Aluminum Oxide		
Sulfur	0 - 4	7704-34-9	(Respirable Dust)	5 mg/m ³	
Iron Compounds	0 - 1	various	(Total Dust)	10 mg/m ³	10 mg/m ³
Titanium Compounds	0 - 1	various	Crystalline Silica		
Manganese Compounds	0 - 1	various	(Respirable Dust)	0.1 mg/m ³	0.1 mg/m ³
Potassium Compounds	0 - 1	various	Magnesium Oxide	10 mg/m ³	10 mg/m ³
Crystalline Silica	0 - 0.2	14808-60-7	Iron Oxide	10 mg/m ³	5 mg/m ³
			Titanium Oxide		
			(Respirable Dust)	5 mg/m ³	
			(Total Dust)	15 mg/m ³	10 mg/m ³
			Nuisance Dust		
			(Respirable Dust)	5 mg/m ³	5 mg/m ³
			(Total Dust)	15 mg/m ³	10 mg/m ³

SECTION 3 - HAZARDS IDENTIFICATION

Emergency Overview

This product 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 cement can cause serious, potentially irreversible tissue (skin or eye) destruction in the form of chemical (caustic) burns. The same type of tissue destruction can occur if wet or moist areas of the body are exposed for sufficient duration to dry cement.

Potential Health Effects

Relevant Routes of Exposure:

Eye contact, skin contact, inhalation, and ingestion.

Eye Contact:

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

Eye contact by dry powder or splashes of wet product may cause effects ranging from moderate eye irritation to chemical burns and blindness. In case of such exposures, seek immediate first aid (see Section 4) and/or medical attention.

Skin Contact:

Exposure to dry product may cause drying of the skin with consequent mild irritation. Dry cement

contacting wet skin or exposure to moist or wet 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) chemical burns. Minimize 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.

Some individuals may exhibit an allergic response upon exposure to this product, possibly due to trace amounts of chromium. The response may range from a mild rash to severe skin ulcers.

Inhalation:

This product may contain trace amounts of free crystalline silica. Prolonged exposure to respirable free crystalline silica can aggravate other lung conditions and cause silicosis, a disabling and potentially fatal lung disease. (Also see "Carcinogenic Potential".)

Exposure to this product may cause irritation to the moist mucous membranes of the nose, throat, and other respiratory system. It may also leave unpleasant deposits in the nose.

Ingestion:

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

Carcinogenic Potential:

This product 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.

Crystalline silica, a potential trace level contaminant in this product, is now classified by IARC as a known human carcinogen (Group 1). NTP has characterized respirable silica as "reasonably anticipated to be [a] carcinogen".

This product contains slight quantities of titanium oxide in complexes with calcium oxides. Free titanium oxide has been classified by IARC as having "limited evidence of carcinogenicity in animals."

Medical Conditions Which May Be Aggravated By Inhalation or Dermal Exposure:

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 lids, to remove all particles. Call a physician immediately.

Inhalation of Airborne Dust

Remove to fresh air. Seek medical help if coughing and other symptoms do not subside. ("inhalation" of gross amounts of this product require immediate medical attention).

Skin

Wash skin with cool water and pH-neutral soap or a mild detergent. 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.

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 and method	None
Lower Explosive Limit	None
Upper Explosive Limit	None
Hazardous Combustion Products	None
Unusual Fire & Explosion Hazards	None
Auto Ignition Temperature	Not Combustible
Extinguishing Media	Not Combustible
Special Fire Fighting Procedures	None (Although this product poses no fire-related hazards, a self-contained breathing apparatus is recommended to limit exposure to combustion products when fighting any fire).

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Stop and contain spills, use appropriate personal protection and tools (ie. broom and shovel), clean up spill avoiding actions that create dusting. Place material into suitable clean, dry containers for reclamation or disposal.

SECTION 7 - HANDLING & STORAGE

Keep this product 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 product. If contact occurs, promptly wash affected area with soap and water. Where prolonged exposure to unhardened cement products might occur, wear impervious clothing and gloves to eliminate skin contact. Where required, wear sturdy boots that are impervious to water to eliminate foot and ankle exposure.

Do not rely on barrier creams; barrier creams should not be used in place of gloves.

Periodically wash areas contacted by dry 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 clean, dry clothing.

Respiratory Protection

Avoid actions that cause dust to become airborne. Use local or general ventilation to control exposures below applicable exposure limits. Use NIOSH approved respirators in poorly ventilated areas, if an applicable exposure limit is exceeded, or when dust causes discomfort or irritation.

Ventilation

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

Eye Protection

Where potentially subject to splashes or puffs of cement, 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 this product or fresh cement products.

SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES

Odor	Slight sulfur odor	Vapor Density	Not applicable
Physical State	Solid (powder)	Boiling Point	>1000 °C
pH (in water)	9.0 - 11.5	Melting Point	Not applicable
Solubility In Water	Slightly Soluble	Specific Gravity (H ₂ O = 1.0)	2.8 - 3.0
Vapor Pressure	Not applicable	Evaporation Rate	Not applicable

SECTION 10 - STABILITY & REACTIVITY

<u>Stability</u>	Stable
<u>Conditions To Avoid</u>	Avoid contact with organic and inorganic acids in low pH environments (pH<5)
<u>Hazardous Polymerization</u>	Will not occur
<u>Hazardous Decomposition</u>	Will not spontaneously occur. Avoid exposure to acids in low pH environments.
<u>Incompatibility</u>	Product exposed directly to acids in a low pH environment (pH<5) may release hydrogen sulfide. Hydrogen sulfide is a hazardous, toxic and poisonous gas.

SECTION 11 - ECOLOGICAL INFORMATION

<u>Ecotoxicity</u>	No recognized unusual toxicity to plants or animals.
<u>Relevant Physical & Chemical Properties</u>	(See Section 9 and 10)

SECTION 12 - DISPOSAL

Dispose of waste material according to local, state and federal regulations. Dispose of bags in an approved landfill or incinerator.

SECTION 13 - TRANSPORTATION DATA

<u>DOT or TDG shipping</u>	Not a hazardous material	<u>Identification Number</u>	NA
<u>Hazard Class</u>	NA	<u>Required Label Text</u>	NA

SECTION 14 - OTHER REGULATORY INFORMATION

OSHA Hazard Communication Rule, 29 CFR 1910.1200

This product is considered a "hazardous chemical" under this regulation, and should be part of any hazard communication program.

CERCLA/Superfund, 40 CFR 117 and 302

Not listed.

SARA (Title III), Section 311 and 312

This product qualifies as a "hazardous substance" with immediate and delayed health effects.

SARA (Title III), Section 313

Not subject to reporting requirements under Section 313.

Toxic Substance Control Act

Substances in this product are on the TSCA inventory list.

The Federal Hazardous Substances Act

This product is a "hazardous substance" subject to statutes promulgated under the subject act.

SECTION 15 - OTHER INFORMATION

Abbreviations:

CAS No.	Chemical Abstract Service Number
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
ACGIH	American Conference of Governmental Industrial Hygienists
TLV	Threshold Limit Value
TWA	Time Weighted Average (8 hour)
CL	Ceiling Limit
mg/m ³	Milligrams per cubic meter
IARC	International Agency for Research on Cancer
NIOSH	National Institute for Occupational Safety and Health
pH	Negative log of hydrogen ion
>	Greater than
DOT	U.S. Department of Transportation
TDG	Transportation of Dangerous Goods
CFR	Code of Federal Regulations
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
SARA	Superfund Amendments and Reauthorization Act

The data in this Material Data Safety Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. The information set forth herein is based on technical data Lehigh Portland Cement Company believes reliable. It is intended for use by persons having technical skill and at their own discretion and risk. Inexperienced product users should obtain proper training before using this product. Since conditions of use are outside the control of Lehigh Portland Cement Company, no warranties, expressed or implied, are made and no liability is assumed in connection with any use of this information. Any use of this data and information must be determined by the user to be in accordance with federal, state and local laws and regulations.

Creation Date: June, 1991

Revision Date: September, 1997