MATERIAL SAFETY DATA SHEET

February 03, 2010

SECTION 1	CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Masonry Cements ("Supermortar" Dynamortar" "Plastic Cement")**

Manufacturer's Name and Address:

Salt River Materials Group
Phoenix Cement Company
8800 E. Chaparral Rd. Suite 155
Scottsdale, AZ 85250-2606

24 – Hour Emergency Telephone: CHEMTREC: 1-800-424-9300

Customer Service: (480)-850-5757 Fax (480) 850-4333

Chemical Name: Mixture

Chemical Formula: Complex mixture of inorganic minerals including metals and silica

SECTION 2	COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients:
Portland cement (CAS #65997-15-1) – approximately 75% by weight
ACGIH TLV-TWA (1995-1996) = 10 mg total dust/m^3
OSHA PEL (8-hour TWA) = 50 million particles/ft^3

Hydrated Lime (CAS #58398-71-3) approximately 10% by weight
ACGIH TLV 5 TOTAL MG/M_3 (MFR)
OSHA PEL 5 TOTAL MG/M_3 (MFR)

Class F Fly Ash – approximately 10% by weight
Ingredients:
Silica (CAS #7631-86-9) 50 to 75%
Aluminum Oxide (CAS #1344-28-1) 20 to 35%
{OSHA TWA 15mg/m^3 tot} {OTHER OSHA LIMIT 1mg/m^3 respirable}
{ACGIH LIMIT 10 mg/m^3 as aluminum}
Silica Oxide (Quartz) (CAS #14808-60-7) 0 to 0.5%
{ACGIH TWA 0.1 mg/m^3 re}

Ferric Oxide (CAS #1309-37-1) 1 to 8%
{OSHA TWA 10mg/m³} {ACGIH TWA 5mg/m³ as I}
Calcium Oxide (CAS #1305-78-8) 1 to 8%
{OSHA TWA 5mg/m³} {ACGIH TWA 2 mg/m³}

Gypsum (CAS #7778-18-9) – approximately 5% by weight
ACGIH TLV-TWA (1995-1996) = 10mg total dust/m³
OSHA PEL (8-hour TWA) = 15 mg total dust/m³
OSHA PEL (8-hour TWA) = 5 mg respirable dust/m³

Limestone – approximately innately 10% by weight

Respirable quartz (CAS #14808-60-7) – less than 0.75% by weight
ACGIH TLV-TWA (1995-1996) = 0.10 mg respirable quartz dust/m³
OSHA PEL (8-hour TWA) = (10 mg of respirable dust/m³) (percent silica+2)
NIOSH REL (8-hour TWA) = 0.05 mg respirable quartz dust/m³

Other ingredients:
Diethylene-glycol (CAS #111-46-6) less than 0.1% by weight
Amine Phenolate (CAS #23184-71-6/64601-03-2) less than 0.1% by weight
Tall Oil (CAS #61790-45-2) less than 0.1% by weight
Fatty Acids (CAS #8002-26-4/61790-12-.3) less than 0.1% by weight

Trace constituents:
Masonry cement is made from materials mined from the earth and is processed using heat provided by fossil fuels. Trace amounts of naturally occurring; potentially harmful chemicals might be detected during chemical analysis. For example, masonry cement may contain up to 15% insoluble residue, some of which may be free crystalline silica. Other trace constituents may include magnesium oxide, potassium sulfate, sodium sulfate, chromium compounds, and nickel compounds.

Chemical Family:
Calcium salts. Calcium silicate salts and other calcium salts containing iron and aluminum make up the majority of this product.

Chemical Name and Synonyms:
Portland cement and Masonry cement are also known as hydraulic cement.

Formula:
This product consists of finely ground Portland cement clinker mixed with up to 10% type S Hydrated Lime, up to 10 % Fly Ash, up to 10% Limestone and a small amount of calcium sulfate (gypsum).

SECTION 3	HAZARD IDENTIFICATION

POTENTIAL HEALTH EFFECTS

Inhalation:
Masonry cement 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. Iron Oxide contained in Fly Ash upon chronic exposure may result in iron pigmentation of the lungs, siderosis, and benign pneumoconiosis. (Also see "Carcinogenic potential" below)

Exposure to masonry 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.

Oral or Swallowed:
Although small quantities of dust are not known to be harmful, ill effects are possible if larger quantities are consumed. Masonry cement should not be eaten.

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

Eye contact by larger amounts of dry powder or splashes of wet masonry cement may cause effects ranging from moderate eye irritation to chemical burns and blindness. Calcium Oxide may cause acute corneal damage if sufficient amounts contact cornea. Such exposures require immediate first aid (see Section 4) and medical attention to prevent significant damage to the eye.

Skin:
Discomfort or pain cannot be relied upon to alert a person to 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 masonry cement may cause drying of the skin with consequent mild irritation or more significant effects attributable to aggravation of other conditions. Dry masonry cement contacting wet skin or exposure to moist or wet masonry 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 (alkali) chemical burns.

.

Carcinogenic Potential:
Masonry 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.

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

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 MEASURES

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.

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.

Inhalation of Airborne Dust:
Remove to fresh air. Seek medical help if coughing and other symptoms do not subside. ("Inhalation" of gross amounts of masonry cement requires immediate medical attention)

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

SECTION 5	FIRE FIGHTING MEASURES

Flash Point:
None

Upper Explosion Limit: None
Lower Explosion Limit: None

Auto ignition Temperature:
Not combustible

Extinguishing Media:
Not combustible

Special Fire Fighting Procedures:
None – (Although masonry 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	ACCIDENTIAL RELEASE MEASURES

Personal Precautions:
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.

Environmental Precautions and Methods for Clean up:
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

Handling:
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.

Storage:
Keep masonry cement dry until used. Normal temperatures and pressures do not affect the material.

SECTION 8	EXPOSURE CONTROL / PERSONAL PROTECTION

PERSONAL PROTECTION

Respiratory:
Avoid actions that cause dust to become airborne. Use local and general ventilation to control exposures below applicable 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.)

Eye/Face:
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 masonry cement or fresh cement products.

Skin:
Prevention is essential to avoiding potentially severe skin injury. Avoid contact with unhardened masonry cement. If contact occurs, promptly wash affected area with soap and water. Where prolonged exposure to unhardened masonry 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 masonry 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.

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

SECTION 9	PHYSICAL AND CHEMICAL PROPERTIES

Appearance:
Gray powder

Odor:
No distinct odor

Specific Gravity (H_2O = 1.0):
2.50 to 2.70

Vapor Density:
Not applicable

Vapor Pressure:
Not applicable

Evaporation Rate:
Not applicable

Boiling Point:
Not applicable (i.e.,>1000C)

Melting Point:
Not applicable

Solubility in Water:
Slightly soluble (0.1 to 1.0%)

CHEMICAL PROPERTIES
The major compounds contained in Masonry Cement are:

Tricalcium Silicate	($3CaO, SiO_2$),	<70%
Dicalcium Silicate	($2CaO, SiO_2$),	<40%
Tricalcium Aluminate	($3CaO, A1_2O_3$)	<15%
Tetracalcium Aluminoferrite	($3CaO, A1_2O_3, Fe_2O_3$)	<18%
Calcium Sulfate	($CaSO_4$)	<10%
Gypsum	($CaSO_4, H_2O$)	<10%
Gypsum Anhydrite	($CaSO_4, 0.5\ H_2O$)	<10%
Type S Hydrated Lime	($Ca(OH)_2 \cdot Mgo$)	<10%

SECTION 10	STABILITY AND REACTIVITY

Stability:
Stable when dry – reacts with water or moisture.

Incompatibility:
Wet masonry cement is alkaline. As such it is incompatible with acids, ammonium salts and phosphorus.

Hazardous Polymerization:
Will not occur

Hazardous Decomposition:
Will not spontaneously occur. Adding water produces (caustic) calcium hydroxide.

Conditions to Avoid:

Unintentional contact with water.

Masonry Cements ("Supermortar" Dynamortar" "Plastic Cement")

SECTION 11	TOXICOLOGICAL INFORMATION

For a description of available, more detailed toxicological information, contact the 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)

SECTION 13	DISPOSAL CONSIDERATIONS

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

Dispose of bags in an approved landfill or incinerator.

SECTION 14	TRANSPORTATION DATA

Materials Description/Proper Shipping Name:
Masonry 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/Reportable Quantities (RQ):
Not applicable

SECTION 15	OTHER REGULATORY INFORMATION

Status under USDOL – OSHA Hazard Communications Rules, 29 CFR 1910.1200
Masonry cement is considered a "hazardous chemical" under this regulation, and should be part of any hazard communication program.

Status under CERCLA/Superfund, 40 CFR 117 and 302
Not listed

Hazard Category under SARA (Title III), Sections 311 and 312
Masonry 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 and all potentially covered constituents are present in de minimus concentrations.

Status under TSCA (as of May 1997)
Some substances in masonry cement are on the TSCA inventory list.

Status under the Federal Hazardous Substances Act
Masonry cement is a "hazardous substance" subject to statutes promulgated under the subject act.

Status under California Proposition 65
This product contains up to 0.05 percent of chemicals (trace elements) 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.

SECTION 16	OTHER INFORMATION

Prepared by:
Phoenix Cement Company

Approved by:
Phoenix Cement Company

Approval Date or Revision Date:
February 03, 2010

Date of Previous MSDS:
2005

Other Important Information

Masonry cement should only be used by knowledgeable persons. A key to using the product safely requires the user to recognize that masonry cement chemically reacts with water, and that some of the intermediate products of this reaction (that is, those present while a masonry cement product is "setting") pose a far more severe hazard than does masonry cement itself.

DISCLAIMER:

While the information provided in this material safety data sheet is believed to provide a useful summary of the hazards of masonry cement as it is commonly used, the sheet cannot anticipate and provide all of the information that might be needed in every situation. Inexperienced product users should obtain proper training before using this product.

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THERE OF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY Phoenix Cement Company, except that the product shall conform to contracted specifications. The information provided herein was believed by Phoenix Cement Company, to be accurate at the time of preparation or prepared from sources believed to be reliable. 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. Buyer's exclusive remedy shall be for damages and no claim of any kind, whether as to product delivered or for non-delivery of product, and whether based on contract, breach of warranty, negligence, or otherwise shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

In particular, the data furnished in this sheet does not address hazards that may be posed by other materials mixed with masonry cements to produce masonry cement products. Users should review other relevant material safety data sheets before working with this masonry cement or working on masonry cement products, for example, masonry cements concrete.