



Royal White Cement, INC

**8316 East Freeway
Houston, TX 77029
Tel: 1-866-W-CEMENT**

MASONRY CEMENT

MATERIAL SAFETY DATA SHEET

Section 1 – IDENTIFICATION

Product Names: Royal White Cement, INC. Masonry Cement – Types N and S.

Product Code: Standard Industrial Classification: 3241.

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

Major compounds	CAS#
3CaO_SiO2 Tricalcium silicate	12168-85-3
2CaO_SiO2 Dicalcium silicate	10034-77-2
3CaOAl2O3 Tricalcium aluminate	12042-78-3
4CaO_Al2O3_Fe2O3 Tetracalcium aluminoferrite	12068-35-8
CaSO4_2H2O Calcium sulfate dihydrate or Gypsum	7778-18-9
CaCO3 Calcium carbonate or limestone	1317-65-3

Chemical Name and Synonyms: Masonry Cement, also known as hydraulic cement.

Formula: This product consists of finely ground Portland cement clinker, limestone, and calcium sulfate.*

Supplier/Manufacturer: ROYAL WHITE CEMENT, INC. 8316 East Freeway Houston, TX 77029.

Emergency Contact Information:

Safety Director: 713-676-0000 EXT. 104

Quality Control Manager: 713-676-0000 EXT. 104

***Trace Elements**

Masonry cement is made from materials mined from the earth and is processed using energy provided by fuels; and therefore may contain trace amounts of naturally occurring materials which might be detected during chemical analysis. For example: Masonry cement may contain up to 5% insoluble residue, of which <2% may be free crystalline silica. Other trace constituents may include potassium and sodium sulfate compounds, chromium compounds, and nickel compounds.

Section 2 – COMPONENTS

Name	CAS#	Components
Portland Cement Clinker	65997-15-1	50 million particles/ft ³ 10mg total dust/m ³ Nominal 64% by weight
Calcium sulfate	7778-18-9	5mg respirable dust/m ³ 10mg total dust/m ³
Gypsum	13397-24-5	10mg total dust/m ³ Nominal 4% by weight
Crystalline silica	14808-60-7	10mg respirable dust/m ³ 0.10mg respirable dust 0.05mg respirable <2% by weight (%SiO ₂ + 2) quartz dust/m ³ quartz dust/m ³
Calcium Carbonate	1317-65-3	5mg respirable dust/m ³ 10mg total dust/m ³ (Limestone) 15mg total dust/m ³ Nominal 30% by weight

Section 3 – HAZARDS IDENTIFICATION/TOXICOLOGICAL INFORMATION

Emergency Overview: Masonry 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 masonry cement can cause serious, potentially irreversible tissue (including 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 dry masonry cement.

Potential Health Effects: Potential effects resulting from **eye contact:** Exposure to airborne dust may cause immediate or delayed irritation or inflammation. 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. Potential 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 or avoiding skin contact, particularly contact with wet cement. Persons exposed to wet cement 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 (caustic) chemical burns. Some individuals may exhibit an allergic response upon exposure to masonry cement, possibly due to trace amounts of chromium. 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 hydraulic cement products.

Potential effects resulting from **inhalation:** Masonry cement contains free crystalline silica. Prolonged exposure to respirable free crystalline silica may aggravate other lung conditions. It also may cause delayed lung injury including silicosis, a disabling and potentially fatal lung disease. (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. Potential effects resulting from **ingestion:** 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 under any circumstances.

Carcinogenic Potential: Masonry cement is not listed as a carcinogen by IARC, NTP, or OSHA. It does, however, contain a substance listed as a carcinogen by some of these organizations. Crystalline silica is now classified by IARC as a known human carcinogen (Group 1). NTP has characterized respirable crystalline 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

Eyes: Immediately flush eyes thoroughly with water. Continue flushing eyes 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 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 exposures 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 a physician immediately.

Section 5 – FIRE & EXPLOSION DATA

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*
Hazardous Combustion Products	None
Unusual Fire and Explosion Hazards	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.)

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 masonry cement down drains. Dispose of waste material according to local, state and federal regulations.

Section 7 – HANDLING AND STORAGE

Keep masonry cement dry until used. Normal temperature and pressure do not affect the materials. 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 mixture or fluids.

Section 8 – EXPOSURE CONTROL/PERSONAL PROTECTION

Skin Protection: Prevention is essential to avoiding potentially severe skin injury. Avoid contact with unhardened (wet) masonry cement products. 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 and boots to eliminate skin contact.

Respiratory Protection: Avoid actions that cause dust to become airborne. Use local or general ventilation to control exposures below applicable exposure limits. Use NIOSH/MSHA-approved respirators in poorly ventilated areas when dust causes discomfort or irritation, or where there is an applicable exposure limit (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 below applicable limits.

Eye Protection: When engaged in activities where cement dust or wet cement or concrete 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 masonry cement or fresh cement products.

Section 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical And Chemical Properties	
Appearance	Gray or White powder
Odor	No distinct odor
Physical state	Solid (powder)
pH (in water)(ASTM D 1293-95)	12 to 13
Solubility in water	Slightly soluble (0.1 to 1.0%)
Vapor pressure	Not applicable
Vapor density	Not applicable
Boiling point	Not applicable (i.e. > 1000_C)
Melting point	Not applicable
Specific gravity	(H2O = 1.0) 2.98
Evaporation rate	Not applicable

Section 10 – STABILITY AND REACTIVITY

Stability: Stable.

Conditions To Avoid: Unintentional contact with water.

Incompatibility: Wet masonry 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 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

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

Section 14 – TRANSPORTATION DATA

Hazardous Materials Description/Proper Shipping Name: Masonry cement is not hazardous under U.S. Department of Transportation (DOT) regulations.

Section 15 – OTHER REGULATORY INFORMATION

Status Under USDOL-OSHA Hazard Communication Rule 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(v): Not listed.

Hazard Category Under SARA (Title III) Section 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.

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 WHMIS: Masonry cement is considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products regulations (class E - corrosive material) and is therefore subject to the labeling and MSDS requirements of the workplace hazardous materials information system (WHMIS).

Section 16 – OTHER INFORMATION

Prepared By: ROYAL WHITE CEMENT, INC. - 8316 East Freeway - Houston, TX 77029

Other Important Information: Masonry cement should only be used by knowledgeable persons. Inexperienced product users must obtain proper training before using this product. 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.

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, and does not, anticipate and provide all of the information that might be needed in every situation. In particular, the data furnished in this sheet does not address hazards that may be posed by other materials mixed with masonry cement products. Users therefore, should review other applicable material safety data sheets before working with this masonry cement or working on masonry cement products, for example, masonry cement concrete.

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