



MATERIAL SAFETY DATA SHEET

Material: Special Cements for
Masonry Mortar & Stucco

Section I – Identification

Supplier: Name: Holcim (US) Inc. Address: 201 Jones Road Waltham, MA 02451 Telephone: (781) 647-2307	Emergency Contact Information: (CHEMTREC) Health 1-800-424-9300 Transportation 1-800-424-9300
Product Codes: Masonry Cement Type O, N, S and M. Cement-Lime Type O, N, S and M. Mortar Cement Type S, Stucco Cement. (This MSDS covers many products. Individual constituents will vary.)	Formula: These products consist of various blends of Portland cement, masonry cement, ground calcium carbonate, hydrated lime and color pigments.
Chemical Family: Calcium silicate components and other calcium compounds containing iron and aluminum make up the majority of this product, as well as, hydrated lime and pigments.	Chemical Name and Synonyms: Holcim Mortamix Masonry Cement, Holcim Mortar Cement, Holcim Cement-Lime, Holcim Mortamix Rainbow Custom Color Masonry Cement, Holcim Rainbow Custom Color Cement-Lime, Holcim Custom Stucco

Section II - Components

Hazardous Ingredients

Component	CAS No.	OSHA PEL (8-hour TWA) ¹	ACGIH TLV ²
Masonry cement	65997-15-1	15 mg/m ³ (T); 5 mg/m ³ (R) ³	None ³
Portland cement	65997-15-1	15 mg/m ³ (T); 5 mg/m ³ (R) ³	None ³
Limestone (Calcium Carbonate) ⁴	1317-65-3	15 mg/m ³ (T); 5 mg/m ³ (R)	10 mg/m ³ (T)
Gypsum (Calcium Sulfate) ⁴	13397-24-5	15 mg/m ³ (T); 5 mg/m ³ (R)	10 mg/m ³ (T)
Hydrated lime (Calcium Magnesium Hydroxide) ⁴	39445-23-3	15 mg/m ³ (T); 5 mg/m ³ (R) ³	None ³
Magnesium oxide	1309-48-4	15 mg/m ³	10 mg/m ³ (I)
Calcium Oxide	1305-78-8	5 mg/m ³	2 mg/m ³
Red Pigment (Hematite)	1317-60-8	15 mg/m ³ (T); 5 mg/m ³ (R) ³	None ³
Red Pigment (Iron Oxide)	1309-37-1	10 mg/m ³	5 mg/m ³ (R)
Yellow Pigment	51274-00-1	15 mg/m ³ (T); 5 mg/m ³ (R) ³	3 mg/m ³
Black Pigment	12227-89-3	15 mg/m ³ (T); 5 mg/m ³ (R)	3 mg/m ³
Ochre	1343-81-3	0.1 mg/m ³	0.1 mg/m ³
Crystalline Silica (Quartz) ⁵	14808-60-7	10 mg/m ³ (R) /(percent silica + 2) 30 mg/m ³ (T) /(percent silica + 2)	0.025 mg/m ³ (R)

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Symbology Used:

- (I) = Measured as inhalable fraction of the aerosol (see 2010 ACGIH-TLV Booklet for Additional Information)
- (R) = Measured as respirable fraction
- (T) = Total particulate; OSHA's Particulates Not Otherwise Regulated (PNOR); or ACGIH's Particulates Not Otherwise Classified (PNOC)
- (E) = For particulate matter containing no asbestos and <1% crystalline silica.

Trace constituents: Cement is made from materials mined from the earth and processed using energy provided by fuels. Additional materials such as fly ash, kiln dust and slag may also be introduced into the cement manufacturing process. A chemical analysis of cement may reveal trace amounts of naturally occurring but potentially harmful chemical compounds such as free crystalline silica, organic compounds, potassium and sodium compounds, heavy metals including cadmium, chromium (including hexavalent chromium), nickel and lead. Other trace constituents may include calcium oxide (also known as free lime or quick lime) and organic compounds from grinding aids such as amine acetate salts, glycols and 1,2-ethanediol.

¹ U.S. Occupational Safety and Health Administration (OSHA) permissible exposure limits (PELs) are based on Occupational Safety and Health Standards (29 CFR 1910.1000-1052) established at the time this MSDS was last updated.

² American Conference of Governmental Industrial Hygienists (ACGIH) threshold limit values (TLVs) were taken from the 2010 publication of the *Guide to Occupational Exposure Values* established at the time this MSDS was last updated. Any component with no defined TLV designation is listed as "none."

³ OSHA standards (29 CFR 1910.1000 Table Z-1), defined these components as inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name in Table Z-1 are covered by PNOR limit which is the same as the inert or nuisance dust limit of Table Z-3 or ACGIH as PNOC.

⁴ This product and various formulations of this generic component are also known by various synonyms and are assigned various CAS numbers. This MSDS does not attempt to list all possible synonyms, chemical formulations or multiple CAS numbers assigned to substances in this category of compounds.

⁵ The National Institute for Occupational Safety and Health (NIOSH) recommended exposure limit (REL) is based on time-weighted average (TWA) concentration for up to a 10-hour workday during a 40-hour workweek. For this chemical NIOSH REL is 0.05 mg/m³ respirable quartz dust.

Section III - Hazards Identification

Emergency Overview

Masonry mortar & stucco cements are powders of different color. They are not combustible or explosive. Exposure of sufficient duration to masonry mortar & stucco cements can cause serious, potentially irreversible tissue (skin or eye) destruction in the form of chemical (caustic) burns. The caustic property of the masonry mortar & stucco cement may also cause irritation or burns to the respiratory tract if this material is inhaled. The same type of tissue destruction can occur if wet or moist areas of the body are exposed for sufficient duration to masonry mortar & stucco cement. Masonry mortar & stucco cements contains trace amounts of a variety of metals, such as hexavalent chromium which has an OSHA Permissible Exposure Limit (PEL) (8-hour time weighted average) of 5µg/m³, an OSHA Action Level of 2.5 µg/m³, and an ACGIH TLV of 10 µg/m³.

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. Eye contact with larger amounts of dry powder or splashes of wet masonry mortar or stucco may cause effects ranging from moderate eye irritation to chemical burns and blindness. Such exposures require immediate first aid (see section IV) 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 masonry mortar or stucco. Exposed persons may not feel discomfort until hours after the exposure has ended and significant injury has occurred.

Exposure to dry masonry mortar or stucco may cause drying of the skin with consequent mild irritation or more significant effects attributable to aggravation of other conditions. Dry masonry mortar or stucco contacting wet skin or exposure to moist or wet masonry mortar or stucco 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 mortar or stucco, 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 the first contact with the product. Other persons may experience this effect after years of contact with masonry mortar or stucco products.

- *Effects resulting from inhalation:* Special cement for masonry mortar & stucco contains small 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 and/or other diseases. Risk of injury or disease depends on duration and degree of exposure. (Also see "Carcinogenic potential" below.) Exposure to masonry cement or stucco 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.
- *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 or stucco should not be eaten.
- *Carcinogenic potential:* Masonry cement or stucco has not been 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, which is present in masonry cement or stucco in small amounts, has been listed by IARC and NTP as a known human carcinogen (Group I) through inhalation. Hexavalent chromium is listed by IARC, EPA, NTP and OSHA as a Group I known carcinogen by inhalation.
- *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 IV - 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 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 masonry mortar or stucco, wet mortar or stucco liquids from fresh masonry mortar or stucco products, or prolonged wet skin exposure to dry masonry cement or stucco.

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

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

Section V - Fire & Explosion Data

Flash point:	<i>None</i>	Auto ignition temperature:	<i>Not Combustible</i>
Lower Explosive Limit:	<i>None</i>	Upper Explosive Limit:	<i>None</i>
Extinguishing media:	<i>Not Combustible</i>	Unusual fire & explosion hazards	<i>None</i>
Hazardous combustion products:	<i>None</i>		
Special fire fighting procedures:	None. (Although special cements for masonry mortar and stucco poses no fire-related hazards, a self-contained breathing apparatus is recommended to limit exposure to combustion products when fighting any fire.)		

Section VI - 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 VIII.

Scrape up wet material and place in an appropriate container. Allow the material to "dry" before disposal. Do not attempt to wash masonry cement or stucco down drains. Dispose of waste material according to local, state, and federal regulations.

Section VII - Handling & Storage

Keep special cements for masonry mortar & stucco 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 mortar or stucco mixtures or fluids.

Section VIII - Exposure Control/Personal Protection

Skin Protection: Prevention is essential to avoid potentially severe skin injury. Avoid contact with unhardened wet masonry mortar or stucco products. If contact occurs, promptly wash affected area with soap and water. Where prolonged exposure to unhardened masonry mortar or stucco products might occur, wear impervious clothing and gloves to prevent 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 impervious gloves and clothing. Periodically wash areas contacted by dry masonry mortar or stucco or wet mortar or stucco 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 mortar, 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/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: In conditions where user may be exposed to splashes or puffs of masonry cement or stucco, wear safety glasses with side shields or goggles. In extremely dusty or unpredictable environments, wear unvented or indirectly vented goggles to avoid eye irritation or injury. Contact lenses should not be worn when working with masonry mortar or stucco or fresh cement products.

Section IX - Physical & Chemical Properties

Appearance:	<i>Gray, buff, or colored powder</i>	Vapor Pressure:	<i>Not applicable</i>
Odor:	<i>No distinct odor</i>	Vapor density:	<i>Not applicable</i>
Physical state:	<i>Solid (powder)</i>	Boiling point:	<i>Not applicable (i.e., > 1000 °C)</i>
pH (in water):	<i>12 to 13</i>	Melting point:	<i>Not applicable</i>
Solubility in water:	<i>Slightly (0.1 to 1.0%)</i>	Specific gravity (H ₂ O = 1.0):	<i>2.80-3.00</i>
Evaporation Rate:	<i>Not applicable</i>		

Section X - Stability & Reactivity

Stability:	<i>Stable.</i>
Incompatibility:	<i>Wet masonry mortar or stucco is alkaline. As such it is incompatible with acids, ammonium salts, and aluminum metal.</i>
Conditions to avoid:	<i>Unintentional contact with water.</i>
Hazardous decomposition:	<i>Will not spontaneously occur. Adding water produces (caustic) calcium hydroxide as a result of hydration.</i>
Hazardous polymerization:	<i>Will not occur.</i>

Section XI - Toxicological Information

For a description of available, more detailed toxicological information, contact Holcim (US) Inc. (in Section I).

Section XII - Ecological Information

Ecotoxicity: *No recognized unusual toxicity to plants or animals*

Relevant physical and chemical properties: *See Sections IX & X*

Section XIII – Disposal

Dispose of waste material according to local, state, and federal regulations. (Since masonry cement & stucco is stable, uncontaminated material may be saved for future use.) Dispose of bags in an approved landfill or incinerator.

Section XIV - Transportation Data

Hazardous materials description/proper shipping name: *Special cement for masonry mortar & stucco are not hazardous under U.S. Department of Transportation (DOT) regulations*

Hazard class: *Not applicable*

Identification class: *Not applicable*

Required label text: *Not applicable*

Hazardous substances/reportable quantities (RQ): *Not applicable*

Section XV - Other Regulatory Information

Status under USDOL-OSHA Hazard Communication Rule, 29 CFR 1910.1200: *Masonry cement & stucco 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 & 312: *Masonry cement & stucco 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 & stucco are on the TSCA inventory list.*

Status under the Federal Hazardous Substances Act: *Masonry cement & stucco are "hazardous substances" subject to statutes promulgated under the subject act.*

Status under California Proposition 65: *WARNING: This product contains chemicals known to the State of California to cause cancer and 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.*

Workplace Hazardous Material Information System (Canada): *Masonry cement & stucco are considered to be a hazardous material under the Hazardous Product 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 XVI - Other Information

Revision Date: February 24, 2011

Reviewed by: James Joyce, Corporate Manager
Occupational Health, Safety, and Security

Approved by: Russell Wiles, Senior Vice President
Human Resources

Other important information: Special cements for masonry mortar & stucco should only be used by knowledgeable persons. While the information provided in the material safety data sheet is believed to provide a useful summary of the hazards of masonry cement & stucco 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.

A key to using the product safely requires the user to recognize that masonry mortar & stucco chemically reacts with water, and that some of the intermediate products of this reaction (that is, those present while a masonry cement or stucco product is "setting") pose a more severe hazard than does masonry mortar or stucco itself. These hazards include potential injuries to eyes and skin.

The data furnished in this sheet do not address hazards that may be posed by other materials mixed with masonry cement or stucco to produce masonry mortar & stucco products. Users should review other relevant material safety data sheets before working with this masonry cement or stucco or with masonry mortar or stucco products.

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