MATERIAL SAFETY DATA SHEET (MSDS) FOR MASONRY CEMENT

(Complies with OSHA's Hazard Communication Standard, 29 CFR 1910.1200)



CEMEX, INC.
BROOKSVILLE SOUTH CEMENT PLANT
10311 CEMENT PLANT ROAD
BROOKSVILLE, FLORIDA 34601

Section 1 - IDENTIFICATION

Supplier/Manufacturer

CEMEX, Inc.
Brooksville North Cement Plant
16301 Ponce De Leon Blvd.
Brooksville, Florida 34616

Emergency Contact Information

(352) 796-7241

Chemical name and synonyms

Masonry Cement (CAS #65997-15-1)

Product name

"CEMEX Broco Regular Masonry"
"CEMEX Broco High-strength Masonry"
"CEMEX Broco Stucco"
"CEMEX Broco White Masonry"

Chemical family	Formula	
Calcium salts.	$3CaO.SiO_2$	(CAS #12168-85-3)
	$2CaO.SiO_2$	(CAS #10034-77-2)
	$3CaO.Al_2O_3$	(CAS #12042-78-3)
	$4CaO.Al_2O_3.Fe_2O_3$	(CAS #12068-35-8)
	$CaSO_4.2H_2O$	(CAS #13397-24-5)
Other salts:	Small amounts of MgO, and trace amounts of K_2SO_4 and Na_2SO_4 may also be present.	

Section 2 - COMPONENTS

Hazardous Ingredients

Masonry cement clinker (CAS# 65997-15- 1) - approximately - 47.2-70.5 % by weight
ACGIH TLV-TWA (2000) = 10 mg total dust/m^3
OSHA PEL (8-hour TWA) = 50 million particles/ft^3

Calcium Carbonate (CAS# 1317-65-3) - approximately - 25.0-45.0 % by weight
ACGIH TLV-TWA (2000) = 10 mg total dust/m^3
OSHA PEL (8-hour TWA) = 15 mg total dust/m^3
OSHA PEL (8-hour TWA) = 5 mg respirable dust/m^3

Gypsum/Calcium Sulfate Dihydrate (CAS# 7778-18-9) - approximately - 4.0-6.5 % by weight
ACGIH TLV-TWA (2000) = 10 mg total dust/m^3
OSHA PEL (8-hour TWA) = 15 mg total dust/m^3
OSHA PEL (8-hour TWA) = 5 mg respirable dust/m^3

Respirable quartz (CAS# 14808-60-7) - approximately - 0.5-1.3 % by weight
ACGIH TLV-TWA (2000) = 0.05 mg respirable quartz dust/m^3
OSHA PEL (8-hour TWA) = (10 mg respirable dust/$m^{3)}$/(percent silica + 2)

Trace Ingredients

Trace amounts of naturally occurring chemicals might be detected during chemical analysis. Trace constituents may include up to 3.0% insoluble residue, some of which may be free crystalline silica, calcium oxide (Also known as lime or quick lime), magnesium oxide, potassium sulfate, sodium sulfate, chromium compounds, and nickel compounds.

Section 3 - HAZARD IDENTIFICATION

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 (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 masonry cement.

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 by large amounts of dry powder or splashes of wet masonry cement may cause effects ranging from moderate eye irritation to chemical burns or blindness. Such exposures require immediate first aid (see Section 4) 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 hazardous skin exposure. Consequently, the only effective means of avoiding skin injury or illness involves minimizing skin contact, particularly with wet cement. Exposed persons may not feel discomfort until hours after the exposure has ended and significant injury has occurred.

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.

Some individuals may exhibit an allergic response upon exposure to masonry cement, possibly due to trace elements 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 masonry cement products.

Effects Resulting from Inhalation:
Masonry cement may contain trace amounts of free crystalline silica. Prolonged exposure to respirable free silica can aggravate other lung conditions and cause silicosis, a disabling and potentially fatal lung disease.

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.

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.

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 contaminate in Masonry cement, is now classified by IARC as known human carcinogen (Group I). NTP has characterized respirable silica as "reasonably anticipated to be [a] carcinogen".

Medical conditions which may be aggravated be, 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 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.

Ingestion

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

Section 5 - FIRE AND 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

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 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 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. 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 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 exhaust 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 June 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

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.

Section 9 - PHYSICAL AND CHEMICAL, PROPERTIES

Appearance.....Gray Powder
Physical state.....Solid (powder)
Solubility in water...Slightly soluble (0.1 to 1.0%)
Vapor density.....Not applicable
Melting point.....Not applicable
Evaporation rate.....Not applicable
Odor.....No distinct odor
pH (in water).....12 to 13
Vapor pressure.....Not applicable
Boiling point.....Not applicable (i.e., > 1000 C)
Specific gravity (H20 = 1.0).....2.87-3.00

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 phosphorous.

Hazardous decomposition

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

Hazardous Polymerization

Will not occur.

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

Dispose of waste material according to local, state and federal regulations. (Since 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

Hazardous materials description/proper shipping name
Masonry is 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 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
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.

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

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Director - Health and Safety
CEMEX, Inc.
Houston, Texas

Approval date or Revision date

Approved: August, 1997
Revised: March, 2001

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 more severe hazard than does dry 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 anticipate and provide the all of the information that might be needed in every situation. Inexperienced product users should obtain proper training before using this product.

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In particular, the data furnished in this sheet do not address hazards that may be posed by other materials mixed with masonry cement 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 cement concrete.