SIBLINE CEMENT

MATERIAL SAFETY DATA SHEET

Material: Portland & Masonry Cement

Section 1 - IDENTIFICATION

Chemical name and synonyms Product name
Product Codes: All cement types in accordance with Lebanese Norms NL:53 (1999).
This MSDS covers many products. Individual constituents will vary.

Chemical family Formula
Calcium and calcium silicate salts as also other calcium compounds containing iron and aluminum with small amounts of MgO, and trace amounts of K2SO4 and Na2SO4 may also be present.

Section 2 - COMPONENTS

Portland cement clinker
Limestone
Gypsum
Respirable quartz
Trace Ingredients: Trace amounts of naturally occurring chemicals might be detected during chemical analysis. Trace constituents may include up to 1% 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 – HAZARDS IDENTIFICATION

Portland 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 portland 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 portland 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 portland 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 people may not feel discomfort until hours after the exposure has ended and significant injury has occurred.

Dry portland cement contacting wet skin or exposure to moist or wet portland 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 portland 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. People already sensitized may react to their first contact with the product. Other persons may first experience this effect after years of contact with portland cement products.

Effects Resulting from Inhalation:
Portland 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 portland 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. Portland cement should not be eaten.

Carcinogenic potential:
Portland cement is not listed as a carcinogen by OSHA. It may, however, contain trace amounts of substances listed as carcinogens by these organizations.
Crystalline silica, a potential trace level contaminate in Portland cement, is now classified by IARC known as human carcinogen (Group I). NTP has characterized respirable silica as "reasonably anticipated to be [a] carcinogen".
Medical conditions which may be aggravated, 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 the eyes for at least 15 minutes, including under lids, to remove all particles. Call the 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 firefighting 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 it 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

Keep portland 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 reusing. 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 portland cement.

If contact occurs, promptly wash affected area with soap and water. Where prolonged exposure to unhardened portland 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 portland 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 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 portland cement or fresh cement products.

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 it 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 9 - PHYSICAL AND CHEMICAL, PROPERTIES

Appearance.....Gray Powder
Odor.....No distinct odor
Physical state.....Solid (powder)
pH (in water).....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): 3.15
Evaporation rate.....Not applicable

Section 10 - STABILITY AND REACTIVITY

Stability; Stable.

Conditions to avoid: Unintentional contact with water.

Incompatibility: Wet Portland 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 portland 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
Portland is cement is non-hazardous material.
Hazard class -Not applicable
Identification number- Not applicable.
Required label text- Not applicable.
Hazardous substances/reportable quantities (RQ)- Not applicable.

Other important information

Portland cement should only be used by knowledgeable people. While the information provided in the material safety data sheet is believed to provide a useful summary of the hazards of portland 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.

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

The data furnished in this sheet do not address hazards that may be posed by other materials mixed with portland cement to produce portland cement products. Users should review other relevant material safety data sheets before working with this portland cement or with portland cement products, including, for example, portland cement concrete.

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