
Section 1 - IDENTIFICATION

Supplier/Manufacturer

CEMEX, Inc.
5180 Golden Foothill Parkway, Suite 200
El Dorado Hills, CA 95762

Emergency Contact Information

(916) 941-2800

Chemical name and synonyms

Hydrated Portland Cement (CAS #65997-15-1)

Product name

Ready Mixed Concrete

Chemical family

Calcium salts.

3CaO.SiO

Formula

$2CaO.SiO_2$ (CAS #12168-85-3)
 $3CaO.Al_2O_3$ (CAS #10034-77-2)
 $4CaO..Al_2O_3Fe_2O_3$ (CAS #12042-78-3)
CaSO₂.2H₂O (CAS #12068-35-8)
(CAS #13397-24-5)

Section 2 - COMPONENTS

Hazardous Ingredients

Portland cement (CAS# 65997-15- 1) - approximately 10.0-20.0 % by weight

ACGIH TLV-TWA (2000) = 10 mg total dust/m³

OSHA PEL (8-hour TWA) = 50 million particles/ft³

Respirable quartz (CAS# 14808-60-7) – greater than 0.1% by weight

ACGIH TLV-TWA (2000) = 0.05 mg respirable quartz dust/m³

OSHA PEL (8-hour TWA) = (10 mg respirable dust/m³)/(percent silica + 2)

Trace Ingredients

Concrete Aggregates: Inert sand, gravel, and stone

Concrete Additives and Admixtures: May include flyash, and very amounts of organic and inorganic materials which have no effect on the hazards associated with these of this product such as air entrained agents, water reducers, superplasticizers, fibrous reinforcement, pigments, ect.

Section 3 - HAZARD IDENTIFICATION

Emergency Overview

Exposure of sufficient duration to ready mixed concrete can cause serious, potentially irreversible tissue (skin or eye) destruction in the form of chemical (caustic) burns.

Potential Health Effects

Relevant Routes of Exposure:

Eye contact, skin contact, and ingestion.

Effects Resulting from Eye Contact:

Eye contact by splashes of concrete 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, with concrete. Exposed persons may not feel discomfort until hours after the exposure has ended and significant injury has occurred.

Exposure to concrete 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 concrete, 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 concrete products.

Effects Resulting from Ingestion:

Although small quantities of concrete are not known to be harmful, ill effects are possible if larger quantities are consumed. Concrete should not be eaten.

Carcinogenic potential:

Concrete 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 component in concrete, 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 by dermal exposure:

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 material. 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 concrete or fresh concrete products.

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

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 concrete down drains.

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

Section 7 - HANDLING AND STORAGE

Normal temperatures and pressures do not affect the material.

Promptly remove clothing that is wet with concrete or its fluids and launder before reuse. Wash thoroughly after exposure to concrete or its fluids.

Section 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION**Skin Protection**

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

If any cutting, grinding, scarifying, or any other procedures are employed to hardened Portland cement concrete, dusting may occur. If possible, 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, if involved in dust generating activities associated with hardened Portland cement concrete.

Eye Protection

Where potentially subject to splashes of concrete, wear safety glasses with side shields or goggles. Contact lenses should not be worn when working with concrete.

Section 9 - PHYSICAL AND CHEMICAL, PROPERTIES

Appearance.....	Gray granular mud	Odor	No distinct odor
Physical state.....	Fluid	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 (H ₂ O = 1.0).....	Greater than 3.0
Evaporation rate.....	Not applicable			

Section 10 - STABILITY AND REACTIVITY**Stability**

Stable.

Conditions to avoid

None known.

Incompatibility

Concrete 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.

Dispose of bags in an approved landfill or incinerator.

Section 14 - TRANSPORTATION DATA

Hazardous materials description/proper shipping name

Ready mixed concrete 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

Concrete 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

Concrete 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 ready mixed concrete are on the TSCA inventory list.

Status under the Federal Hazardous Substances Act

Concrete 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

CEMEX, Inc.
Houston, Texas

Approval date or Revision date

Approved: September 1998

Revised: January 2008

Other important information

While the information provided in this material safety data sheet is believed to provide a useful summary of the hazards of ready mixed concrete 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 portland cement concrete to produce portland cement products. Users should review other relevant material safety data sheets before working with portland cement concrete.