



Alamo Concrete Products Company

SAFETY DATA SHEET

ALAMO CONCRETE PRODUCTS COMPANY – READY MIX CONCRETE

HMIS Label

HEALTH	3*
FLAMMABILITY	0
PHYSICAL HAZARD	1
PERSONAL PROTECTION	X

* - Varies depending on product

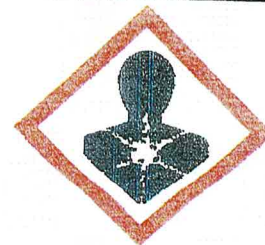
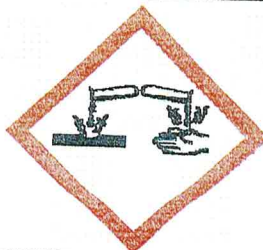
SECTION 1 – IDENTIFICATION

PRODUCT IDENTIFIER Freshly Mixed Unhardened Concrete, Ready Mix Concrete, Wet Concrete, Ready Mix, Hardened Concrete, Mud, Concrete, Flowable Fill	
RECOMMENDED USE Common construction building material for slabs, driveways, roads, bridges, sidewalks and other construction projects	
MANUFACTURER'S NAME Alamo Concrete Products Company	EMERGENCY TELEPHONE NUMBER 1(800) 292-5210
ADDRESS P.O. Box 34210 San Antonio, Texas 78265-4210	TELEPHONE NUMBER FOR INFORMATION in Texas: 1(800) 292-5210 Other: 1(210) 208-1500
PREPARER Walter D. Scott, III	DATE PREPARED May 1, 2013, Replaces any prior version

SECTION 2 – HAZARD(S) IDENTIFICATION

GHS HAZARD CLASSIFICATION Acute Toxicity Oral, Category 4 Acute Toxicity Dermal, Category 4 Acute Toxicity Inhalation, Category 3 Skin Irritation, Category 1B Eye Effects, Category 1 Respiratory Sensitization, Category 1 Skin Sensitization, Category 1 Carcinogenicity, Category 1A Specific Target Organ Toxicity Repeat Exposure, Category 1	SIGNAL WORD Danger
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HAZARD STATEMENT – Harmful if swallowed. Can cause severe skin burns and eye damage. Exposure to wet concrete may cause irritation, drying, thickening, cracking or fissuring of the skin or mucous membranes. Prolonged exposure can cause sever skin damage in the form of (caustic) chemical burns. Cutting, grinding, crushing, or drilling hardened concrete or concrete products will generate dust that may contain crystalline silica. Repeated overexposures to very high levels of crystalline silica have caused acute silicosis.



PRECAUTIONARY STATEMENT - Precautions and good work practices must be observed when handling this material. See Section 8 of this Safety Data Sheet regarding proper personal protection.

HAZARDS NOT OTHERWISE CLASSIFIED – See Section 8 for Exposure Control and Personal Protection

MIXTURES – Concrete is a mixture of Portland cement, water, aggregates and chemical admixtures inclusive of pozzolans. See Section 3 of this Safety Data Sheet for composition/ingredient information.



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SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	COMMON NAME AND SYNONYMS	
Ready Mix Concrete	Freshly Mixed Unhardened Concrete, Ready Mix Concrete, Wet Concrete, Ready Mix, Hardened Concrete, Mud, Concrete, Flowable Fill	
HAZARDOUS COMPONENTS AND CAS		
Portland Cement CAS# 65997-15-1	Tricalcium Silicate $3CaO - SiO_2$ Dicalcium Silicate $2CaO - SiO_2$ Tricalcium Aluminate $3CaO - Al_2O_3$ Tetracalcium Aluminoferrite $4CaO - Al_2O_3 - Fe_2O_3$ Calcium Sulfate Dihydrate $CaSO_4 - 2H_2O$	% TYPICAL ~ 3 - 20*
Concrete Aggregate	Aggregate Quartz CAS #: 14808-60-7 Cristobalite CAS #: 14464-46-1 Calcium Carbonate CAS #: 1317-65-3	~ 60 - 95*
Water CAS #: 7732-18-5	H2O	~ 6 - 13*
Concrete Admixtures	Admixtures may include coal fly ash (CAS #: 68131-74-8), and very small amounts of organic and inorganic materials that have no effect on the hazards associated with the use of the product.	
Trace Constituents	Unhardened concrete is made from materials mined from the earth and some are processed using energy provided by fossil fuels. Trace amounts of naturally occurring; potentially harmful chemicals might be detected during chemical analysis. For example, Portland cement aggregates, and admixtures may contain up to 0.75% insoluble residue, some of which may be free crystalline silica (CAS #: 14808-60-7). Other trace constituents may include calcium oxide (also know as free lime or quick lime), free magnesium oxide, potassium and sodium sulfate compounds, chromium compounds, and nickel compounds.	

* - Varies depending on product

SECTION 4 - FIRST-AID MEASURES

EMERGENCY AND FIRST AID PROCEDURES
<p>EYES – Immediately flush eyes thoroughly with water. Continue flushing eye for at least 15 minutes, including under lids to remove all particles. Contact lens should not be worn when working with this material. Get medical attention immediately.</p> <p>SKIN – Wash skin with cool water and pH neutral soap or mild detergent. Seek medical treatment in all cases of prolonged exposure to wet concrete. symptoms do not subside.</p> <p>INHALATION – Remove exposed person to fresh air. Encourage victim to cough, spit out an blow nose to remove dust. Seek medical help if coughing or other symptoms do not subside.</p> <p>INGESTION – Do not induce vomiting. Keep person warm and at rest, if conscious have the victim drink plenty of water and call a physician immediately.</p>
SIGNS AND SYMPTOMS OF EXPOSURE
<p>Exposure to wet concrete may cause irritation, drying, thickening, cracking or fissuring of the skin or mucous membranes. Prolonged exposure can cause severe skin damage in the form of (caustic) chemical burns. Eye exposure may cause irritation and redness.</p> <p>Acute: Wet plastic, unhardened concrete can dry the skin ad cause alkali irritation (cement dermatitis). Can also cause irritation to eyes, nose and throat. Irritation of skin and burning sensation particularly when exposure is in an area of skin previously subjected to abrasion or irritation.</p> <p>Cutting, grinding, crushing, or drilling hardened concrete or concrete products will generate dust that may contain crystalline silica. Acute effects of exposure to such dust may include: Eye Contact: Direct contact with dust can cause irritation; Skin Contact: Direct contact can cause irritation; Ingestion: Large amounts may cause gastrointestinal irritation and blockage; Inhalation: Dusts will irritate the nose, throat, and respiratory tract. Coughing, sneezing, and shortness of breath may occur following exposures in excess of recommended exposure limits. Repeated overexposures to very high levels of crystalline silica have caused acute silicosis.</p> <p>Chronic exposure to respirable dust containing crystalline silica in excess of applicable OSHA PELs, MSHA PELs, and ACGIH TLVs has caused silicosis, a progressive lung disease. Symptoms of silicosis may include (but not limited to): shortness of breath, difficulty breathing with or without exertion, coughing, diminished work capacity, diminished chest expansion, reduction of lung volume, right heart enlargement and/or failure. Persons with silicosis have an increased risk of pulmonary tuberculosis infection.</p>
MEDICAL CARE
Seek immediate medical care if necessary

SECTION 5 - FIRE-FIGHTING MEASURES

SPECIAL FIRE EXTINGUISHING EQUIPMENT: None	
SPECIAL HAZARDS AND HAZARDOUS COMBUSTION PRODUCTS: None	UNUSUAL FIRE AND EXPLOSION HAZARDS: None
SPECIAL PROTECTIVE EQUIPMENT (PRECAUTIONS FOR FIREFIGHTERS): None (Although concrete poses no fire related hazards, a self-contained breathing apparatus is recommended to limit exposure to combustion products and/or dust generated when fighting any fire).	



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SECTION 6 – ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS AND PROTECTIVE EQUIPMENT

Precautions and good work practices must be observed because alkali burns can occur with little warning – little heat is sensed. Avoid contact with skin. Refer to Section 8 of this Safety Data Sheet for information on personal protective equipment.

EMERGENCY PROCEDURES – STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Persons involved in cleanup processes should first observe precautions identified in Section 8 of this SDS. Prevent from entering sewers or drainage systems. Follow the Cleanup Procedures listed below.

METHODS AND MATERIALS USED FOR CONTAINMENT

Prevent unhardened material from entering sewers or drainage systems by using sand bags, aggregate material, sand or other material. Cover drain inlets if necessary.

CLEANUP PROCEDURES

Persons involved in cleanup processes should first observe precautions identified in Section 8 of this SDS. Wet product should be removed from roads or other surfaces where it may interfere with traffic. Prevent from entering sewers or drainage systems where it can harden and clog flow. If hardened material is spilled and dust, cleanup personnel may be exposed to respirable crystalline silica. Wetting of spilled material and the use of respiratory protective equipment may be necessary. No neutralizing agent specified.

WASTE DISPOSAL METHOD

Disposal must be in accordance with local, state, and federal regulations. Material can be retained until it hardens when it can be disposed of as a common waste.

OTHER PRECAUTIONS

None specified

SECTION 7 – HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

Precautions and good work practices must be observed because alkali burns can occur with little warning – little heat is sensed. Avoid contact with skin. See Section 8 regarding personal protection while handling this material.

Note: Wet concrete is alkaline. As such, it is incompatible with acids, ammonium salts and phosphorous.

PRECAUTIONS FOR SAFE STORAGE

Wet concrete is alkaline. As such, it is incompatible with acids, ammonium salts and phosphorous.

OTHER PRECAUTIONS

None specified

SECTION 8 – EXPOSURE CONTROL/PERSONAL PROTECTION

HAZARDOUS COMPONENTS AND CAS		OSHA PEL	ACGIH TLV	% TYPICAL
Portland Cement CAS# 65997-15-1	Tricalcium Silicate (3CaO – Si O ₂) Dicalcium Silicate (2CaO – Si O ₂) Tricalcium Aluminate (3CaO – Al ₂ O ₃) Tetracalcium Aluminoferrite (4CaO – Al ₂ O ₃ – Fe ₂ O ₃) Calcium Sulfate Dihydrate (CaSO ₄ – 2H ₂ O)	TDUST = 15mg/m ³	TDUST = 10mg/m ³	~ 3 - 20*
	Aggregate Quartz (CAS #: 14808-60-7) Cristobalite (CAS #: 14464-46-1) Calcium Carbonate (CAS #: 1317-65-3)	TDUST = 30mg/m ³ %SiO ₂ +2 TDUST = 15mg/m ³ %SiO ₂ +2 TDUST = 15mg/m ³	TDUST = 0.05mg/m ³ TDUST = 0.05mg/m ³ TDUST = 10mg/m ³	~ 60 - 95*

VENTILATION

Use local exhaust or general dilution ventilation to control exposure within applicable limits.

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. When handling wet unhardened concrete, wear water proof 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 gloves. Periodically wash areas contacted by wet concrete 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 concrete, it should be removed and replaced with clean dry clothing.

RESPIRATORY PROTECTION

Avoid actions that cause dust to become airborne. Use local exposures below applicable exposure limits.

Use NIOSH/MSHA-approved (under 30 CFR 11) or NIOSH-approved (under 40 CFR 84) respirators in poorly ventilated areas, if an applicable exposure limits 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).

EYE PROTECTION

Where potentially subject to splashes of wet concrete, 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 fresh concrete products.

When cutting, grinding, crushing, or drilling hardened concrete wear safety glasses with side shields or dust goggles.



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SECTION 9 – PHYSICAL & CHEMICAL PROPERTIES			
APPEARANCE Grey, plastic, flowable, granular mud	FLAMMABLE LIMITS: LEL: None, UEL: None	ODOR No distinct odor	VAPOR PRESSURE (mm Hg) Not Applicable
ODOR THRESHOLD Not Applicable	VAPOR DENSITY (AIR = 1) Not Applicable	pH (IN WATER) 12 to 13	RELATIVE DENSITY Not Applicable
MELTING POINT/FREEZING POINT Not Applicable	SOLUBILITY IN WATER Slight (0.1 to 1.0%)	BOILING POINT AND RANGE Not Applicable	FLASHPOINT Not Applicable
EVAPORATION RATE (Butyl Acetate =1) Not Applicable	SPECIFIC GRAVITY (H₂O = 1) 2.28 (calculated)	PHYSICAL STATE Solid (plastic)	AUTO-IGNITION TEMPERATURE Not Applicable
DECOMPOSITION Will not spontaneously occur. Water added in manufacture produces (caustic) calcium hydroxide.			VISCOSITY Not Applicable

SECTION 10 – STABILITY AND REACTIVITY		
STABILITY Stable	CONDITIONS TO AVOID Unhardened product stiffens and hardens in 2 - 8 hours	Hazardous Polymerization Will not occur
REACTIVITY/INCOMPATIBILITY (MATERIALS TO AVOID): Wet concrete is alkaline. As such, it is incompatible with acids, ammonium salts and phosphorous.		
HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Will not spontaneously occur. Water added in manufacture produces (caustic) calcium hydroxide.		

SECTION 11 – TOXICOLOGY INFORMATION				
WARNING				
<p>Corrosive – Causes severe burns. Toxic – Harmful by inhalation. (Contains crystalline silica)</p> <p>Use proper engineering controls, work practices, and person protective equipment to prevent exposure to wet or dry product Read SDS for details</p>				
ROUTE(S) OF ENTRY Inhalation, skin, eye, ingestion	Inhalation Upper respiratory system irritation and nose tissue lining irritation	Skin Dryness, alkali burns, dermatitis, rash and inflammation	Eye Irritation, chemical burns and blindness	Ingestion High pH may cause irritation, asphyxiation risk
HEALTH HAZARDS				
<p>Acute: Wet plastic, unhardened concrete can dry the skin and cause alkali irritation (cement dermatitis). Can also cause irritation to eyes, nose and throat. Irritation of skin and burning sensation particularly when exposure is in an area of skin previously subjected to abrasion or irritation.</p> <p>Cutting, grinding, crushing, or drilling hardened concrete or concrete products will generate dust that may contain crystalline silica. Acute effects of exposure to such dust may include: Eye Contact: Direct contact with dust can cause irritation; Skin Contact: Direct contact can cause irritation; Ingestion: Large amounts may cause gastrointestinal irritation and blockage; Inhalation: Dusts will irritate the nose, throat, and respiratory tract. Coughing, sneezing, and shortness of breath may occur following exposures in excess of recommended exposure limits. Repeated overexposures to very high levels of crystalline silica have caused acute silicosis.</p> <p>Chronic: Hypersensitive individuals may develop an allergic dermatitis. Chronic bronchitis may result from chronic exposure to dust generated from cutting, grinding, crushing, or drilling hardened concrete. Chronic exposure to respirable limestone dust in excess of the ACGIH TLV has caused pneumoconiosis. Concrete dust may contain more than 0.1% crystalline silica, which is a cancer hazard if inhaled.</p>				
CARCINOGENICITY				
<p>Wet concrete is not listed as a carcinogen by NTP, OSHA or IARC. It may however, contain trace amounts of substances listed as carcinogens by those organizations. Concrete may contain crystalline silica in concentrations greater than 0.1%, principally contributed by the aggregates. Respirable crystalline silica is classified by IARC (International Agency for Research on Cancer) as a known human carcinogen and by NTP (National Toxicology Program) as "reasonably anticipated to be a carcinogen." Crystalline silica in wet concrete is not respirable and does not pose a hazard when the concrete is in its plastic or unhardened state. Once concrete has hardened airborne dust generated by grinding, sawing, drilling, breaking, etc. can lead to potentially hazardous exposures to workers and appropriate respiratory protection precautions should be taken.</p>				
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE				
<p>Pre-existing upper respiratory and lung diseases, dermatitis, unusual hypersensitivity dermal conditions may be aggravated by trace amounts of chromium in cement.</p> <p>Wet concrete is not known to be toxic. Toxicity related to major components of concrete, cement, aggregates and admixtures are negated in the wet concrete form. The wet matrix precludes the potential for inhalation of these constituents which would normally be of occupational safety concern. Individuals with chronic respiratory disorders should minimize inhalation of dust generated from cutting, grinding, crushing, or drilling hardened concrete. Individuals with skin diseases should minimize skin contact with the dust and with wet unhardened concrete.</p>				
SIGNS AND SYMPTOMS OF EXPOSURE				
<p>Exposure to wet concrete may cause irritation, drying, thickening, cracking or fissuring of the skin or mucous membranes. Prolonged exposure can cause severe skin damage in the form of (caustic) chemical burns. Eye exposure may cause irritation and redness.</p>				



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Chronic exposure to respirable dust containing crystalline silica in excess of applicable OSHA PELs, MSHA PELs, and ACGIH TLVs has caused silicosis, a progressive lung disease. Symptoms of silicosis may include (but not limited to): shortness of breath, difficulty breathing with or without exertion, coughing, diminished work capacity, diminished chest expansion, reduction of lung volume, right heart enlargement and/or failure. Persons with silicosis have an increased risk of pulmonary tuberculosis infection.

SECTION 12 – ECOLOGICAL INFORMATION

TOXICITY TESTING No information available	PERSISTENCE & DEGRADATION No information available	BIOACCUMULATION No information available
MOBILITY IN SOIL No information available	OTHER ADVERSE EFFECTS No information available	

SECTION 13 – DISPOSAL CONSIDERATIONS

DISPOSAL CONTAINERS See Section 7 for Handling Procedures	APPROPRIATE DISPOSAL METHODS Dispose of materials in accordance with Federal, State, and Local regulations.	
PHYSICAL AND CHEMICAL PROPERTIES AFFECTING DISPOSAL Dispose of material in accordance with Federal, State, and Local regulations.		
SEWAGE DISPOSAL Prevent material from entering sewers or drainage systems where it may clog flow.		
SPECIAL PRECAUTIONS FOR LANDFILLS OR INCINERATION ACTIVITIES None		

SECTION 14 – TRANSPORTATION INFORMATION

HAZARDOUS MATERIALS DESCRIPTION PROPER SHIPPING NAME Unhardened 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 SUBSTANCE/REPORTABLE QUANTITIES (RQ) Not Applicable		

SECTION 15 – REGULATORY INFORMATION (Not intended to be all-inclusive)

Status under USDOL-OSHA Hazard Communication Rule, 29 CFR 1910.1200
Concrete contains Portland cement, which is considered a "hazardous chemical" under this regulation and should be part of any hazard communication program.

Status under SARA (Title III), Sections 311 and 312
Not subject to reporting requirements under Section 313

Status under the Federal Hazardous Substances Act
Concrete contains Portland cement, which is a "hazardous substance" subject to statutes promulgated under the subject act.

Status under California Proposition 65
This product contains chemicals (trace metals) 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.

Status under Canadian Environmental Protection Act
Not listed.

Status under WHMIS
Concrete contains Portland cement which 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 SDS requirements of the Workplace Hazardous Materials Information System (WHMIS).

SECTION 16 – OTHER INFORMATION

DISCLAIMER OF LIABILITY

Alamo Concrete Products Company believes the information contained herein is accurate, however, Alamo Concrete Products Company makes no guarantees with respect to such accuracy and assumes no liability in connection with the use of the information contained herein by any party. The provisions of the information contained herein is not intended to be and should not be construed as legal advice or as ensuring compliance with federal, state, or local laws and regulations. Any party using this product should review all such laws, rules and regulations prior to use.

NO WARRANTY IS MADE, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE.

Ready mix concrete should only be used by knowledgeable persons. A key to using the product safely requires the user to recognize that unhardened concrete is in a chemically reactive state, and that some of the intermediate products of this reaction (that is, those present while wet concrete is "setting") poses a far more severe hazard than does unhardened concrete itself.

While the information provided in this safety data sheet is believed to provide a useful summary of the hazards of unhardened concrete 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.