SAFETY DATA SHEET (SDS)

READY MIXED CONRETE / CONCRETE

CHANEY ENTERPRISES

Section 1. Identification

Product identifier:	Ready Mixed Concrete
Other means of identification / Trade name:	Concrete, Ready Mix Concrete, Concrete Ready Mix, Portland Cement Concrete, Ready Mix Grout, Permeable Concrete, Shotcrete, Gunite, Colored Concrete, Flowable Fill, Roller- Compacted Concrete, Fiber Reinforced Concrete, Mud
Identified uses:	Concrete is widely used as a structural component in many construction applications.
Supplier's details:	Chaney Enterprises (Chaney Materials, LLC and associated subsidiaries and affiliates) 2410 Evergreen Road, Suite 201 Gambrills, MD 21054 Phone: 301-932-5000 https://www.chaneyenterprises.com/
Emergency telephone number:	Phone: 301-932-5000, 301-932-5021 Poison Help line: 1-800-222-1222

Section 2. Hazards Identification

Classification of mixture:	**Skin Corrosion/Irritation:** Category 1 **Eye Damage/Irritation:** Category 1 **Sensitization – Skin:** Category 1 **Specific Target Organ Toxicity** **(Single Exposure):** Category 3 **(Repeated Exposure):** Category 2 **Carcinogenicity:** Category 1A
Signal word:	**Danger**
Pictograms:	
Hazard statements:	Cause severe skin burns and serious eye damage May cause an allergic skin reaction May cause respiratory irritation May cause cancer by inhalation May cause damage to organs (lung/respiratory system) through prolonged or repeated exposure (inhalation)
Precautionary statements:	**Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. **Personal Protective Equipment:** Use as required, including but not limited to protective gloves clothing, eye and/or face protection. Precautions: Wash hands thoroughly after handling. Avoid breathing dust, fume or vapor. May cause eye and skin burns. See Section 4 for additional details.

Continued…	May present risk of engulfment. See Section 7 for additional details. Overexposure to wet concrete can cause severe, potentially irreversible tissue (skin, eye, respiratory tract) damage in the form of chemical burns, including third degree burns. The same severe injury can occur if wet or moist skin is exposed to dry Ready Mixed Concrete dust. Clothing wet with moisture from concrete can transmit the caustic effects to the skin, causing chemical burns. Ready Mixed Concrete may cause skin burns with little warning; discomfort or pain cannot be relied upon to alert a person to a serious injury. Pain or the severity of the burn may not be felt or known until hours after the exposure. Medical conditions which may be aggravated by exposure: Contact with wet concrete may aggravate existing skin conditions. Sensitivity to hexavalent chromium can be aggravated by exposure.
Supplemental Information:	Ready mix concrete contains a naturally occurring mineral complex with varying quantities of quartz (crystalline silica). Respirable Crystalline Silica (RCS) may cause cancer. Hardened ready mix concrete may be subjected to various natural or mechanical forces that produce small particles (dust) which may contain respirable crystalline silica (particles less than 10 micrometers in aerodynamic diameter). Repeated inhalation of respirable crystalline silica (quartz) may cause lung cancer according to IARC, NTP; ACGIH states that it is a suspected cause of cancer.

Section 3. Composition/Information on Ingredients

Substance/mixture:	Mixture (Portland Cement, Coarse Aggregate, Fine Aggregate, Water, Admixtures). Structure of Ready Mixed Concrete may contain the below in some concentration ranges.

Hazardous Components (Chemical Identity/Common Names)	%	CAS Number
Quartz (Aggregates / Crystalline Silica)(1)	0.5-80	14808-60-7
Limestone (Aggregates)	0-80	131 7-65-3
Hydraulic Cement (Portland Cement)	0-20	65997-15-1
Slag Cement (ferrous metal, blast furnace)	0-15	65996-69-2
Ashes, residues (Fly ash)	0-15	68131-74-8

(1) The composition of Quartz may be up to 100% crystalline silica; content of material varies naturally
Any concentration shown as a range is to protect confidentiality or is due to batch variation. Chemical admixtures may be present in ranges of less than 1%.

Trace Materials: Due to the use of substances from the earth's crust, trace amounts of naturally occurring, potentially harmful constituents may be detected during chemical analysis. Portland cement may contain trace (<0.05%) amounts of chromium salts or compounds (including hexavalent chromium) or other metals (including nickel compounds, lead and mercury) found to be hazardous or toxic in some other forms. Other trace constituents may include potassium and sodium sulfate compounds and others.

Individual composition of hazardous constituents may vary between types/different mix designs of Ready Mixed Concrete. There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid Measures

Inhalation:	If excessive inhalation occurs, remove to fresh air. Dust generated from hardened product in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists or develops later.
Skin contact:	Wash with cool water and a pH neutral soap or a mild skin detergent. Seek medical attention for rash, burns, irritation, dermatitis, and prolonged unprotected exposures to wet concrete.
Eye contact:	Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician.
Ingestion:	Get medical attention immediately. Call a poison center or physician. Have victim rinse mouth thoroughly with water. Do not induce vomiting unless directed to do so by medical personnel.
Most important symptoms/effects, acute and delayed:	Contact with wet product may result in chemical (caustic) burns and eye injury which may be progressive and could cause blindness. Wet product may result in chemical burns to the skin. Dust may irritate the skin and respiratory tract. Breathing silica-containing dust for prolonged periods in the workplace can cause lung damage and a lung disease known as silicosis. There are generally no signs or symptoms of exposure to respirable crystalline silica. Often, chronic silicosis has no symptoms. The symptoms of chronic silicosis, if present, are shortness of breath, wheezing, cough and sputum production. The symptoms of acute silicosis which can occur with exposures to very high concentrations of respirable crystalline silica over a very short time period, sometimes as short as 6 months, are the same as those associated with chronic silicosis; additionally, weight loss and fever may also occur. The symptoms of scleroderma, an autoimmune disease, include thickening and stiffness of the skin, particularly in the fingers, shortness of breath, difficulty swallowing and joint problems. Persons with silicosis have an increased risk of pulmonary tuberculosis infection.
Notes to physician:	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
See toxicological information listed in Section 11.	

Section 5. Fire-fighting Measures

Suitable extinguishing media:	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media:	None known.
Specific hazards arising from the product:	No specific fire or explosion hazard.
Hazardous thermal decomposition products may include:	Carbon dioxide, carbon monoxide, sulfur oxides, metal oxide/oxides
Special protective equipment and precautions for fire-fighters:	Fire-fighters should wear appropriate protective equipment.

Section 6. Accidental Release Measures

For non-emergency personnel:	Personnel involved with the handling of wet unhardened concrete should take steps to avoid contact with the eyes and skin, through the use of gloves and suitable clothing as described in Section 8. Silica-containing respirable dust particles may be generated by crushing, cutting, grinding, or drilling hardened concrete or concrete products, and should always be avoided. Follow protective controls defined in Section 8 when handling these products. When cutting, grinding, crushing or drilling hardened concrete, use local exhaust or general dilution ventilation or other suppression methods to maintain dust levels below exposure limits.
For emergency responders :	For personal protective clothing and equipment requirements, please see Section 8.
Environmental precautions:	Wet unhardened concrete should be recycled or allowed to harden and disposed. Do not wash concrete down sewage and drainage systems or into bodies of water (e.g. lakes, streams, wetlands, etc.).
Methods and materials for containment and cleaning up spills:	Place spilled material into a contained area and allow wet unhardened concrete to harden and dispose in a landfill as common solid waste. Follow applicable Federal, State, and local regulations for disposal. Uncontaminated ready mixed concrete is neither a listed nor a characteristic hazardous waste under designations by the USEPA or USDOT.
USDOT Class: Uncontaminated ready mixed concrete does not meet any hazardous material class definition found in Title 49 Code of Federal Regulations Part 173. This product is not subject to the reporting requirements of SARA Title III Section 313, and 40 CFR 372.	

Section 7. Handling and Storage

Precautions for safe handling:	When required use appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure by obtaining and following special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe dust. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get Ready Mixed Concrete inside boots, shoes or gloves. Do not allow wet, saturated clothing to remain against the skin. Promptly remove clothing and shoes that are dusty or wet with concrete mixtures. Launder/clean clothing and shoes before reuse. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities:	Components of Ready Mixed Concrete react chemically with water, to produce calcium hydroxide which can cause severe chemical burns. Every attempt should be made to avoid skin and eye contact with concrete. Do not store near food, beverages, or smoking materials.

Section 8. Exposure Controls/Personal Protection

Ingredient name:	EXPOSURE LIMITS		
	MSHA/ OSHA PEL:	**ACGIH TLV:**	**NIOSH REL:**
Portland cement	15 mg/m^3 (total dust) 5 mg/m^3 (respirable)	10 mg/m^3 (respirable)	10 mg/m^3 (total dust) 5 mg/m^3 (respirable)
Respirable Dust Containing Silica	10 mg/m3 / (%SiO2+2)	Use respirable silica TLV	Use respirable silica TLV
Total Dust Containing Silica	MSHA: 30 mg/m^3 / %SiO2+3)	NE	NE
Respirable Crystalline Silica (quartz, tridymite, cristobalite)	OSHA/MSHA: 50 µg/m^3	0.025 mg/m^3	0.05 mg/m^3
Amorphous Silica	20 mppcf (80 mg/m3/percent silica)	NE	6 mg/m3
Iron Oxide	10 mg/m^3	5 mg/m^3 (respirable)	5 mg/m^3 (respirable)
Magnesium Oxide	15 mg/m^3 (total dust)	10 mg/m^3 (inhalable)	NE
Aluminum Oxide	15 mg/m^3 (total dust) 5 mg/m^3 (respirable)	10 mg/m^3 (total dust)	15 mg/m^3 (total dust) 5 mg/m^3 (respirable)
Manganese Oxide	5 mg/m^3 (as Mn)	0.2 mg/m^3 (as Mn)	1 mg/m^3
Limestone*	15 mg/m^3 (total dust) 5 mg/m^3 (respirable)	N/A	10 mg/m^3 (total dust) 5 mg/m^3 (respirable)
Fly ash*	15 mg/m^3 (total dust) 5 mg/m^3 (respirable)	10 mg/m^3 (total)	N/A
Slag cement	N/A	N/A	N/A
Particulates not otherwise Classified	15 mg/m^3 (total dust) 5 mg/m^3 (respirable)	10 mg/m^3 (total dust) 3 mg/m^3 (respirable)	NE

*Each of these ingredients may have crystalline silica (quartz) as a component. The percent of silica varies greatly from product to product and also within the same product. Silica exposure may occur when respirable dust is present. Dust is not present in freshly mixed unhardened Ready Mixed Concrete.

Admixtures may be present in quantities of less than 1%.

NE = Not Established; PEL = Permissible Exposure Limit; TLV = Threshold Limit Value; REL = Recommended Exposure Limit; OSHA = Occupational Safety and Health Administration; MSHA = Mine Safety and Health Administration; NIOSH = National Institute for Occupational Safety and Health; ACGIH = American Conference of Governmental Industrial Hygienists

Appropriate engineering controls:	Use only with adequate ventilation. If user operations generate dust, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.
General Response	Clean water should always be readily available for skin and (emergency) eye washing. Periodically wash areas contacted by Ready Mixed Concrete with a pH neutral soap and clean, uncontaminated water. If clothing becomes saturated with Ready Mixed Concrete, it should be removed and replaced with clean, dry clothing.
Eye/face Protection	To prevent eye contact, wear safety glasses with side shields, safety goggles or face shields when handling dust or wet concrete. Wearing contact lenses when working with concrete is not recommended.

Hand Protection	Use impervious, waterproof, abrasion and alkali-resistant gloves. Do not rely on barrier creams in place of impervious gloves. Do not get Ready Mixed Concrete inside gloves.
Body Protection	Use impervious, waterproof, abrasion and alkali-resistant boots and long-sleeved and long-legged clothing to protect the skin from contact with wet Ready Mixed Concrete. To reduce foot and ankle exposure, wear impervious boots that are high enough to prevent Ready Mixed Concrete from getting inside them. If finishing concrete, wear waterproof knee pads to protect knees. Do not get Ready Mixed Concrete inside boots, shoes, or gloves. Remove clothing and protective equipment that becomes saturated with concrete and immediately wash exposed areas of the body.
Other skin protection:	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved. Footwear and other gear to protect the skin should be approved by a specialist before handling this product.
Respiratory Protection:	Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. (See OSHA Respiratory Protection Standard 29 CFR 1910.134)

Section 9. Physical and Chemical Properties

Appearance (physical state, color, etc.)	Solid, semi-fluid, plastic, flowable, granular paste, varying Gray color (typ.)	**Upper/lower flammability or explosive limits:**	N/A
Odor:	Odorless	**Vapor pressure:**	N/A
Odor threshold:	N/A	**Vapor density:**	N/A
pH:	Pour solution: 12+	**Relative density:**	Normal weight concrete: 1.7 – 3.0
Melting point/freezing point:	N/A	**Solubility:**	N/A
Initial boiling and boiling range:	N/A	**Partition coefficient: n-octanol/water:**	N/A
Flash point:	Not flammable. Not combustible.	**Auto-ignition temperature:**	N/A
Evaporation rate:	N/A	**Decomposition temperature:**	N/A
Flammability (solid, gas):	N/A	**Viscosity:**	N/A

Section 10. Stability and Reactivity

Reactivity:	Cementitious materials react slowly with water forming hydrated compounds, releasing heat and producing a strong alkaline solution.
Chemical stability:	The product is stable under normal temperatures and pressures.
Possibility of hazardous reactions:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid:	Contact with incompatible materials should be avoided (see below). See Sections 5 and 7 for additional information.

Incompatible materials:	Fresh concrete is caustic (pH approximately 12) and could react with strong acids. Silica reacts violently with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride yielding possible fire and/or explosions. Silica dissolves readily in hydrofluoric acid producing a corrosive gas - silicon tetrafluoride..
Hazardous decomposition products:	Silica-containing respirable dust particles may be generated. When heated, quartz is slowly transformed into tridymite (above 860°C/1580°F) and cristobalite (above 1470°C/2678°F). Both tridymite and cristobalite are other forms of crystalline silica.

Section 11. Toxicological Information

Likely routes of exposure:	Dermal contact. Eye contact. Inhalation. Ingestion.
Symptoms:	
Inhalation:	May cause respiratory irritation. Adverse symptoms may include the following: respiratory tract irritation, coughing
Skin contact:	May cause severe burns. May cause an allergic skin reaction. Adverse symptoms may include the following: pain or irritation, redness, blistering may occur
Eye contact:	May cause serious eye damage. Adverse symptoms may include the following: pain, watering, redness
Ingestion:	May cause burns to mouth, throat and stomach. Adverse symptoms may include the following: stomach pains
Delayed and immediate effects and also chronic effects from short- and long-term exposure:	Hydraulic (Portland) cement may contain trace amounts of hexavalent chromium. Hexavalent chromium has been associated in some individuals with causing allergic reactions which may be manifested as contact dermatitis and skin ulcerations. Individuals who develop allergies to skin sensitizers such as hexavalent chromium, may experience a reaction upon repeated contact with those compounds. Irritated or broken skin is more likely to develop further complications such as ulcers and infection. Dermatitis and allergic reactions have been observed in workers with chronic exposure to fly ash. This was attributed to trace amounts of chromium, cobalt, nickel and other metals in the fly ash. <u>The following information pertains to creating dust from hardened dry material:</u> Prolonged overexposure to respirable dusts in excess of allowable exposure limits can cause inflammation of the lungs leading to possible fibrotic changes, a medical condition known as pneumoconiosis. Prolonged and repeated inhalation of respirable crystalline silica-containing dust in excess of allowable exposure limits may cause a chronic form of silicosis, an incurable lung disease that may result in permanent lung damage or death. Chronic silicosis generally occurs after 10 years or more of overexposure; a more accelerated type of silicosis may occur between 5 and 10 years of higher levels of exposure. In early stages of silicosis, not all individuals will exhibit symptoms (signs) of the disease. However, silicosis can be progressive, and symptoms can appear at any time, even years after exposure has ceased. Repeated overexposures to very high levels of respirable crystalline silica for periods as short as six months may cause acute silicosis. Acute silicosis is a rapidly progressive, incurable lung disease that

	is typically fatal. Symptoms include (but are not limited to): shortness of breath, cough, fever, weight loss, and chest pain. Respirable dust containing newly broken silica particles has been shown to be more hazardous to animals in laboratory tests than respirable dust containing older silica particles of similar size. Respirable silica particles which had aged for sixty days or more showed less lung injury in animals than equal exposures of respirable dust containing newly broken particles of silica. There are reports in the literature suggesting that excessive crystalline silica exposure may be associated with autoimmune disorders and other adverse health effects involving the kidney. In particular, the incidence of scleroderma (thickening of the skin caused by swelling and thickening of fibrous tissue) appears to be higher in silicotic individuals. To date, the evidence does not conclusively determine a causal relationship between silica exposure and these adverse health effects.
Carcinogenicity:	Epidemiology studies on the association between crystalline silica exposure and lung cancer have had both positive and negative results. There is some speculation that the source and type of crystalline silica may play a role. Studies of persons with silicosis indicate an increased risk of developing lung cancer, a risk that increases with the level and duration of exposure. It is not clear whether lung cancer develops in non-silicotic patients. Several studies of silicotics do not account for lung cancer confounders, especially smoking, which have been shown to increase the risk of developing lung disorders, including emphysema and lung cancer. In October 1996, an IARC Working Group designated respirable crystalline silica as carcinogenic (Group 1). In 2012, an IARC Working Group re-affirmed that inhalation of crystalline silica was a known human carcinogen. The NTP's Report on Carcinogens, 9th edition, lists respirable crystalline silica as a "known human carcinogen." In the year 2000, the American Conference of Governmental Industrial Hygienists (ACGIH) listed respirable crystalline silica (quartz) as a suspected human carcinogen (A-2). These classifications are based on sufficient evidence of carcinogenicity in certain experimental animals and on selected epidemiological studies of workers exposed to crystalline silica.
Numerical measures of toxicity:	No data available.

Ingredient name:	**NPT**	**IARC**	**OSHA**	**MSHA**	**NIOSH**	**EPA**	**ACGIH**
Portland cement	Known to be a human carcinogen.	N/A	N/A	N/A	N/A	N/A	A4
Quartz	Known to be a human carcinogen.	1	N/A	N/A	N/A	N/A	A2

Section 12. Ecological Information

Ecotoxicity:	Only relevant in accidental spillages of fresh unhardened concrete. If it reaches water, it can result in a slight rise in pH. Hardened concrete is inert.
Persistence and degradability:	No data available.
Bioaccumulative potential :	No data available.
Mobility in soil:	No data available.
Other adverse effects:	No known significant effects or critical hazards.

Section 13. Disposal Considerations

If disposing Ready Mixed Concrete, it should be done in accordance with local, regional, and national regulations.

The generation of waste should be avoided or minimized wherever possible.

If disposing this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Process water should not be released to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Landfill should only be considered when recycling is not feasible. This material must be disposed of in a safe manner. Avoid dispersal of spilled material and runoff in waterways, drains and sewers. It is the responsibility of the user to determine, at the time of disposal, whether product meets criteria for hazardous waste. Product uses, transformations, mixture and processes, may render the resulting material hazardous.

Section 14. Transport Information

UN number:	Not regulated.
UN proper shipping name:	N/A
Transport hazard class(es):	N/A
Packing group:	N/A
Environmental hazards:	None.
Transport in bulk:	Annex II of MARPOL 73/78 and the IBC Code
Special precautions:	Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory Information

OSHA Hazard Communication: This product is considered by OSHA to be a hazardous material and should be included in the employer's hazard communication program.

CERCLA/SUPERFUND: This product is not listed as a CERCLA hazardous substance.

EPCRA SARA Title III: This product has been reviewed according to the EPA Hazard Categories promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 and is considered a hazardous and a delayed health hazard.

EPCRA SARA Section 313: This product may contain substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

RCRA: If discarded in its hardened form, this product would not be a hazardous waste either by listing characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

TSCA: Portland Cement and crystalline silica are exempt from reporting under the inventory update rule.

California Proposition 65: Crystalline silica (airborne particulates of respirable size), Chromium (hexavalent compounds), cobalt, and nickel, are substances known by the State of California to cause cancer.

WHMIS/DSL: Products containing crystalline silica and calcium carbonate are classified as D2A, E and are subject to WHMIS requirements.

Section 16. Other Information

Date of last revision:	November 2024

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

User's Responsibility: The OSHA Hazard Communication Standard 29 CFR 1910.1200 requires that this SDS be made available to your employees who handle or may be exposed to this product. Educate and train your employees regarding applicable precautions. Instruct your employees to handle this product properly.

Disclaimer:
This Safety Data Sheet is designed for most of the concrete products supplied by Chaney Enterprises. Certain customer specified additives may not be covered or included in this SDS. This SDS represents ingredients and values typical for this product and its constituent ingredients may vary in composition. Information on specific aggregates, cementitious materials, water and admixtures may be provided by the supplier upon request. The information contained in this Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

The suggested precautions and recommendations are based on recognized good work practices and experience as of the date of publication. They are not necessarily all-inclusive or fully adequate in every circumstance as not all use circumstances can be anticipated. It may not be valid for this material if it is used in combination with other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for one's own particular use. Since the actual use of the product described herein is beyond our control, Chaney Enterprises assumes no liability arising out of the use of the product by others. Appropriate warnings and safe handling procedures should be provided to handlers and users. Also, the suggestions should not be confused with nor followed in violation of applicable laws, regulations, rules or insurance requirement. However, this product must not be used in a manner which could result in harm.

An electronic version of this SDS is available at www.chaneyenterprises.com. More information on the effects of crystalline silica exposure may be obtained from OSHA (phone number: 1-800-321-OSHA; website: http://www.osha.gov) or from NIOSH (phone number: 1-800-35-NIOSH; website: h ttp://www.cdc.gov/niosh).