Schuster

Member NRMCA

SAFETY DATA SHEET (SDS)

Ready Mixed Concrete

Section 1. Identification

Product identifier:	Ready Mixed Concrete
Other means of identification:	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
Identified uses:	Concrete is widely used as a structural component in many construction applications.
Supplier's details:	Schuster Concrete Ready Mix, LLC 3713 Crondall Lane, Owings Mills MD 21117 410-363-9620
Emergency telephone number:	Schuster Concrete Ready Mix, LLC – Tom Cason 410-363-9620 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) (Respiratory tract irritation): Category 3
Signal word:	Danger
Pictograms:	
Hazard statements:	Cause severe skin burns and serious eye damage. May cause an allergic skin reaction. May cause respiratory irritation.
Precautionary statements:	Wear protective gloves. Wear eye and/or face protection. Avoid breathing dust. Wash hands thoroughly after handling. May cause eye and skin burns. See Section 4 for additional details. May present risk of engulfment. See

Continued…	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.
Hazards not otherwise classified:	Not applicable.

Section 3. Composition/Information on Ingredients

Substance/mixture:	Mixture (Portland Cement, Coarse Aggregate, Fine Aggregate, Water, Admixtures)
CAS number:	Not applicable.
Product code:	Not applicable.

Ingredient name (Structure of Ready Mixed Concrete may contain the following in some concentration ranges)**:**	%	CAS Number
Quartz (Aggregates)	0-80	14808-60-7
Limestone (Aggregates)	0-80	131 7-65-3
Portland cement	0-20	65997-15-1
Slag cement	0-15	N/A
Fly ash	0-10	68131-74-8

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%.

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:	Seek medical help if coughing or other symptoms persist. Inhalation of large amounts of Ready Mixed Concrete requires immediate medical attention. Call a

	poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If the individual is not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.
Skin contact: **Continued…**	Get medical attention immediately. Heavy exposure to Ready Mixed Concrete dust, wet concrete or associated water requires prompt attention. Quickly remove contaminated clothing, shoes, and leather goods such as watchbands and belts. Quickly wash or brush away Ready Mixed Concrete. Immediately wash thoroughly with gently flowing water and non-abrasive pH neutral soap. Seek medical attention for rashes, burns, irritation, dermatitis and prolonged unprotected exposures to wet concrete, concrete mixtures or liquids from wet concrete. Burns should be treated as caustic 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. You may not feel pain or the severity of the burn until hours after the exposure. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure.
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. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop giving water if the exposed person feels sick as vomiting may be dangerous. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.
Important symptoms/effects, acute and delayed:	
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
Indication of immediate medical attention and special treatment, if necessary:	
If inhaled:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Prolonged and repeated inhalation of respirable crystalline silica-containing dust in excess of appropriate exposure limits has caused silicosis, fibrosis or scar tissue formations in the lungs. Call a poison center or physician if you feel unwell.
If on skin: **Continued…**	Wash with plenty of pH neutral soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: get medical attention. Ready Mixed Concrete may contain trace amounts of hexavalent chromium. Hexavalent chromium is associated with allergic skin reactions which may appear as contact dermatitis and skin ulcerations. Persons already sensitized may react to their first exposure to concrete. Other individuals may develop allergic dermatitis after repeated exposure to concrete. The symptoms of allergic reactions may include reddening of the skin, rash, and irritation. Symptoms of chronic exposure to wet concrete may include reddening, irritation, and eczematous rashes. Drying, thickening, and cracking of the skin and nails may also occur.
If in eyes:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Exposure to dust may cause immediate or delayed irritation or inflammation. Eye contact by larger amount of dry power or splashes of wet Ready Mixed Concrete may cause effects ranging from moderate eye irritation to chemical burns or blindness. Immediately call a poison center or physician.
If ingested:	Irritating to mouth, throat and stomach. Ingestion of large quantities may cause severe irritation and chemical burns of the mouth, throat, stomach and digestive tract. Do not ingest Ready Mixed Concrete. Get immediate medical attention.
Notes to physician:	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Protection of first-aiders:	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wear gloves when removing contaminated clothing.
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.	

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. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities:	A key to using the product safely requires the user to recognize that Ready Mixed Concrete reacts 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 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.

Section 8. Exposure Controls/Personal Protection

Ingredient name:	**Exposure limits:**			
	OSHA PEL:	**ACGIH TLV:**	**NIOSH REL:**	**MSHA PEL:**
Quartz* Continued…	TWA: 10 mg/m3 / (%SiO2+2) 8 hours. Form: Respirable TWA: 250 MPPCF / (%SiO2+5) 8 hours. Form: Respirable	TWA: 0.025 mg/m3 8 hours. Form: Respirable fraction	TWA: 0.05 mg/m3 10 hours. Form: respirable dust	N/A
Portland cement	TWA: 5 mg/m3 8 hours. Form: Respirable fraction TWA: 15 mg/m3 8 hours. Form: Total dust	TWA: 1 mg/m3 8 hours. Form: Respirable fraction	TWA: 5 mg/m3 10 hours. Form: Respirable fraction TWA: 10 mg/m3 10 hours. Form: Total	N/A

Limestone*	TWA: 5 mg/m3 8 hours. Form: Respirable fraction TWA: 15 mg/m3 8 hours. Form: Total dust	N/A	TWA: 5 mg/m3 10 hours. Form: Respirable fraction TWA: 10 mg/m3 10 hours. Form: Total	N/A
Fly ash*	TWA: 5 mg/m3 8 hours. Form: Respirable fraction TWA: 15 mg/m3 8 hours. Form: Total dust	TWA: 10 mg/m3 10 hours. Form: Total	N/A	N/A
Slag cement	N/A	N/A	N/A	N/A

*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%.

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.
Individual protection measures (including Personal Protective Equipment): **Continued…**	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. 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. 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.

	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. 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. 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, flowable, granular paste, varying Gray color, varying	**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: 2.2 to 2.6
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.
Possibility of hazardous reactions:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid:	No specific data.
Incompatible materials:	Reactive or incompatible with the following materials: oxidizing materials, acids, aluminum and ammonium salt. Ready Mixed Concrete is highly alkaline and will react with acids to produce a violent, heat-generating reaction. Toxic gases or vapors may be given off depending on the acid involved. Reacts with acids, aluminum metals and ammonium salts. Aluminum powder and other alkali and alkaline earth elements will react in wet mortar or concrete, liberating hydrogen gas. Limestone ignites on contact with fluorine and is incompatible with acids, alum, ammonium salts, and magnesium. 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. Silicates dissolve readily in hydrofluoric acid producing a corrosive gas - silicon tetrafluoride.
Hazardous decomposition products:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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:	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. If sensitized to hexavalent chromium, a severe allergic dermal reaction may occur when subsequently exposed to very low levels.
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.

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) and Chromium (hexavalent compounds) 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:	March 3, 2016

<u>*NOTICE TO READER/PRODUCT USER:</u>
To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.