

SAFETY DATA SHEET

Argos Ready Mix Concrete (Concrete)



1. IDENTIFICATION

Product Identifier: Ready Mix Concrete (Concrete)

Synonyms: Ready Mix Concrete, Concrete Ready Mix, Portland Cement Concrete, Ready Mix Stucco, Ready Mix grout, Ready Mix, Concrete, Freshly Mixed Concrete, Colloidal Concrete, Permeable Concrete, Shotcrete, Gunitite, Polymer-Portland Cement Concrete, Colored Concrete, Flowable Fill, Roller-Compacted Concrete, Fiber Reinforced Concrete. Includes Florida Super n Sand Stucco Mix and Florida Super n Sand Masonry Mortar Mix.

Intended use of the product: Concrete products are used in a wide variety of applications in buildings and civil engineering projects.

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2. HAZARD IDENTIFICATION

According to OSHA 29 CFR 1910.1200 HCS

Classification of the Substance or Mixture

Classification (GHS-US):

| | | |
|-----------------------------------|-------------|------|
| Skin Corrosion/Irritation | Category 1C | H314 |
| Skin Sensitization | Category 1 | H317 |
| Serious Eye Damage/Eye Irritation | Category 1 | H318 |
| STOT SE | Category 3 | H335 |
| Carcinogenicity | Category 1A | H350 |
| STOT RE | Category 1 | H372 |

Labeling Elements



Signal Word (GHS-US): Danger

Hazard Statements (GHS-US):

H314 – Causes severe skin burns and eye damage.
H317 – May cause an allergic skin reaction.
H318 – Causes serious eye damage.
H335 – May cause respiratory irritation.
H350 – May cause cancer.
H372 – Causes damage to lung through prolonged or repeated exposure inhalation.

Precautionary Statements (GHS-US):

Prevention
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.

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P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
 P264- Wash thoroughly after handling.
 P270 – Do not eat, drink or smoke when using this product.
 P271 – Use only outdoors or in a well-ventilated area.
 P272 - Contaminated work clothing should not be allowed out of the workplace.
 P280 – Wear protective gloves.

Response
 P301+P330+P331 – IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P303+P361+P353 – IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P308+P313 - If exposed or concerned: Get medical attention/advice.
 P310 – Immediately call a POISON CENTER/Doctor.
 P333+P313 - If skin irritation or a rash occurs: Get medical advice/attention.
 P363 – Wash contaminated clothing before reuse.

Storage
 P403+P233 – Store in a well-ventilated place. Keep container tightly closed.

Disposal
 P501- Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazards Not Otherwise Classified: None

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Composition Information

| Name | Product Identifier (CAS#) | % (w/w) | Classification |
|---------------------------|----------------------------|---------|--|
| Limestone | 1317-65-3 | 20-65 | Not Classified |
| Quartz | 14808-60-7 | 0-90 | Carcinogenicity 1A, H350 STOT RE 1, H372 |
| Calcium Hydroxide | 1305-62-0 | 0-25 | Skin Irritant 2, H315 Serious Damage Eye 1, H318 |
| Portland Cement | 65997-15-1 | 10-30 | Skin Corrosive 1C, H314 Serious Damage Eye 1, H318 Skin Sensitization 1, H317 STOT SE 3, H335 |
| Fly Ash | 68131-74-8 | 0-20 | Not Classified |
| Calcium Oxide | 1305-78-8 | 0-5 | Skin Corrosive 1, H314 Serious Damage Eye 1, H318 STOT SE 3, H335 |
| Magnesium oxide | 1309-48-4 | 0-4 | Not Classified |
| Calcium sulfate dihydrate | 133397-24-5 | 0-2 | Not Classified |

The exact percentage (concentration) of the composition has been withheld as proprietary.

Small amounts of naturally occurring, but potentially harmful, chemical compounds might be detected during chemical analysis. These trace compounds might include heavy metals such as arsenic, cadmium, chromium, nickel and lead.

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4. FIRST AID MEASURES

| Route | Measures |
|--------------|---|
| Inhalation | Inhalation of wet product not foreseeable route of exposure. If dust from the material is inhaled, 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. 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. Inhalation of large amounts of Portland cement requires immediate medical attention. Call a poison center or physician. |
| Ingestion | Never give anything by mouth to an unconscious person. Do not induce vomiting. Rinse mouth with water and afterwards drink plenty of water. Get immediate medical attention. |
| Eye Contact | In case of 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 30 minutes. Chemical burns must be treated promptly by a physician. |
| Skin Contact | Wash off with plenty of water. Remove contaminated clothing and shoes. Launder contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. |
| Absorption | As with skin contact, remove contaminated clothing and flush with copious amounts of water. Flush affected area for at least 15 minutes to minimize potential for further absorption. Seek medical attention if significant portions of skin have been exposed. |

Most Important Symptoms

May cause skin burns. May cause serious eye damage. May cause allergic skin reaction. Carcinogen; breathing crystalline silica can cause lung disease, including silicosis and lung cancer. Crystalline silica has also been associated with scleroderma and kidney disease. May cause respiratory irritation. May cause damage to lung through prolonged repeated exposure.

Indication of any immediate medical attention and special treatment needed

Note to physician: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. FIRE-FIGHTING MEASURES

Flammable Properties

This product is not flammable or combustible.

Extinguishing Media

Use an extinguishing agent suitable for the surrounding fire.

Specific Hazards / Products of Combustion

No specific fire or explosion hazard.

Special Precautions and Protective Equipment for Firefighters

Move containers from fire area if this can be done without risk. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

See Section 9 for fire properties of this chemical including flash point, autoignition temperature, and explosive limits

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of dust from the spilled material. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust at levels exceeding the exposure limits. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 for additional information.

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Environmental Precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if reportable thresholds have entered the environment, including waterways, soil or air. Materials can enter waterways through drainage systems.

Containment and Clean-Up Methods

Scrape wet cement and place in container. Allow material to dry or solidify before disposal. Do not wash down sewage or drainage systems or into bodies of water.

7. HANDLING AND STORAGE

Handling Precautions

Avoid contact with eyes, skin, or clothing. This product contains quartz, which may become airborne without a visible cloud. Avoid breathing dust. Avoid creating dusty conditions. Use only with adequate ventilation to keep exposure below recommended exposure limits. Put on 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. Keep in the original container or an approved alternative made from a compatible material and keep the container tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage

Use care in handling/storage. Store in tightly closed original container in a well-ventilated place. Keep away from food, drink and animal feeding stuffs. Store in accordance with local/regional/national/international regulation. Keep out of reach of children.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Calcium Hydroxide (CAS#1305-62-0)

| | | |
|--|--------------------------------|--|
| USA ACGIH | ACGIH TWA (mg/m ³) | 5 mg/m ³ (respirable fraction) |
| USA OSHA Table Z-1 Limits for Air Contaminants | PEL (mg/m ³) | 5 mg/m ³ (respirable fraction) 15 mg/m ³ (total dust) |
| Canada. Alberta OELs | TWA (mg/m ³) | 5 mg/m ³ |
| Canada. British Columbia OELs. | TWA (mg/m ³) | 5 mg/m ³ |
| Canada. Ontario OELs | TWA (mg/m ³) | 5 mg/m ³ |
| Canada. Quebec OELs | TWA (mg/m ³) | 5 mg/m ³ |
| Mexico. Occupational Exposure Limit Values | TWA (mg/m ³) | 5 mg/m ³ |

Calcium Oxide (CAS#1305-78-8)

| | | |
|--|--------------------------------|---|
| USA ACGIH | ACGIH TWA (mg/m ³) | 2 mg/m ³ (respirable fraction) |
| USA OSHA Table Z-1 Limits for Air Contaminants | PEL (mg/m ³) | 5 mg/m ³ |
| Canada. Alberta OELs | TWA (mg/m ³) | 2 mg/m ³ |
| Canada. British Columbia OELs. | TWA (mg/m ³) | 2 mg/m ³ |
| Canada. Ontario OELs | TWA (mg/m ³) | 2 mg/m ³ |
| Canada. Quebec OELs | TWA (mg/m ³) | 2 mg/m ³ |
| Mexico. Occupational Exposure Limit Values | TWA (mg/m ³) | 2 mg/m ³ |

Calcium sulfate dehydrate (CAS#13397-24-5)

| | | |
|--|---|--|
| USA ACGIH | ACGIH TWA (mg/m ³) | 10 mg/m ³ Inhalable fraction |
| USA OSHA Table Z-1 Limits for Air Contaminants | PEL (mg/m ³) | 5 mg/m ³ (respirable fraction) 15 mg/m ³ (total dust) |
| Canada. Alberta OELs | TWA (mg/m ³) | 10 mg/m ³ |
| Canada. British Columbia OELs. | STEL (mg/m ³) TWA (mg/m ³) | 20 mg/m ³ (total dust) 10 mg/m ³ (Inhalable) |
| Canada. Ontario OELs | TWA (mg/m ³) | 10 mg/m ³ (Inhalable fraction) |
| Canada. Quebec OELs | TWA (mg/m ³) | 5 mg/m ³ (respirable dust) 10 mg/m ³ (total dust) |
| Mexico. Occupational Exposure Limit Values | TWA (mg/m ³) | 10 mg/m ³ |

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Limestone (CAS#1317-65-3)

| | | |
|--|--|--|
| USA OSHA Table Z-1 Limits for Air Contaminants | PEL (mg/m ³) | 5 mg/m ³ (respirable fraction) 15 mg/m ³ (total dust) |
| Canada. Alberta OELs | TWA (mg/m ³) | 10 mg/m ³ |
| Canada. British Columbia OELs. | STEL, (mg/m ³) | 20 mg/m ³ (total dust) |
| | TWA (mg/m ³) | 3 mg/m ³ (respirable fraction) 10 mg/m ³ Total dust |
| Canada. Quebec OELs | TWA (mg/m ³) | 10 mg/m ³ (total dust) |
| Mexico. Occupational Exposure Limit Values | STEL, (mg/m ³) TWA (mg/m ³) | 20 mg/m ³ 10 mg/m ³ |

Magnesium oxide (CAS#1309-48-4)

| | | |
|--|--|---|
| USA ACGIH | ACGIH TWA (mg/m ³) | 10 mg/m ³ (inhalable fraction) |
| USA OSHA Table Z-1 Limits for Air Contaminants | PEL (mg/m ³) | 15 mg/m ³ (total particulate) |
| Canada. Alberta OELs | TWA (mg/m ³) | 10 mg/m ³ (fume) |
| Canada. British Columbia OELs. | STEL, (mg/m ³) TWA (mg/m ³) | 10 mg/m ³ (respirable dust and/or fume) 3 mg/m ³ (respirable dust and/or fume) |
| Canada. Ontario OELs | TWA (mg/m ³) | 10 mg/m ³ (Inhalable fume) |
| Canada. Quebec OELs | TWA (mg/m ³) | 10 mg/m ³ (fume) |
| Mexico. Occupational Exposure Limit Values | TWA (mg/m ³) | 10 mg/m ³ (fume) |

Portland cement (CAS#65997-15-1)

| | | |
|--|---|--|
| USA ACGIH | ACGIH TWA (mg/m ³) | 1 mg/ m ³ (respirable fraction) |
| USA OSHA Table Z-1 Limits for Air Contaminants | PEL (mg/m ³) | 5 mg/ m ³ (respirable fraction) 15 mg/ m ³ (total dust) |
| USA OSHA Table Z-3 | TWA (mppcf) | 50 mppcf |
| Canada. Alberta OELs | TWA (mg/m ³) | 10 mg/ m ³ |
| Canada. British Columbia OELs. | TWA (mg/m ³) | 3 mg/m ³ (respirable fraction) 10 mg/m ³ (total dust) |
| Canada. Ontario OELs | TWA (mg/m ³) | 10 mg/m ³ |
| Canada. Quebec OELs | TWA (mg/m ³) | 5 mg/m ³ (respirable dust) 10 mg/m ³ (total dust) |
| Mexico. Occupational Exposure Limit Values | STEL (mg/m ³) TWA (mg/m ³) | 20 mg/m ³ 10 mg/m ³ |

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Quartz (CAS#14808-60-7)

| | | |
|--|--------------------------------|--|
| USA ACGIH | ACGIH TWA (mg/m ³) | 0.025 mg/m ³ (respirable fraction) |
| USA OSHA Table Z-1 Limits for Air Contaminants | PEL (mg/m ³) | 0.05 mg/m ³ Ca. |
| USA OSHA Table Z-3 | PEL (mg/m ³) | 10 mg/m ³ (respirable fraction) (%SiO ₂ + 2); 30 mg/m ³ (total dust) (%SiO ₂ + 2) |
| Canada. Alberta OELs | TWA (mg/m ³) | 0.025 mg/m ³ (respirable fraction) |
| Canada. British Columbia OELs. | TWA (mg/m ³) | 0.025 mg/m ³ (respirable fraction) |
| Canada. Ontario OELs | TWA (mg/m ³) | 0.1 mg/m ³ (Inhalable) |
| Canada. Quebec OELs | TWA (mg/m ³) | 0.1 mg/m ³ (respirable fraction) |
| Mexico. Occupational Exposure Limit Values | TWA (mg/m ³) | 0.025 mg/m ³ |

Particles Not Otherwise Regulated (RR-00072-6)

| | | |
|--|--------------------------------|---|
| USA ACGIH | ACGIH TWA (mg/m ³) | 10 mg/m ³ (total particulate) 3 mg/m ³ (respirable fraction) |
| USA OSHA Table Z-1 Limits for Air Contaminants | PEL (mg/m ³) | 15 mg/m ³ (total particulate) 5 mg/m ³ (respirable fraction) |
| Canada. Alberta OELs | TWA (mg/m ³) | 10 mg/m ³ (total dust) 10 mg/m ³ (respirable dust) |
| Canada. British Columbia OELs. | TWA (mg/m ³) | 10 mg/m ³ (total dust) |
| Canada. Ontario OELs | TWA (mg/m ³) | 10 mg/m ³ (Inhalable fraction) |
| Canada. Quebec OELs | TWA (mg/m ³) | 10 mg/m ³ (fume) |
| Mexico. Occupational Exposure Limit Values | TWA (mg/m ³) | 10 mg/m ³ (fume) |

Engineering Controls

Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing. If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits.

Personal Protective Equipment

| Exposure | Equipment |
|-------------|---|
| Eye / Face | To prevent eye contact, wear safety glasses with side shields, safety goggles or face shields when handling wet cement. Contact lenses should not be worn when working with cement or cement products. |
| Skin | Wear chemical-resistant gloves, footwear and protective clothing appropriate for risk of exposure. Contact glove manufacturer for specific information. Do not rely on barrier crèmes; barrier crèmes should not be used in place of gloves. |
| Respiratory | Avoid tasks which cause dust to become airborne. Use local or general ventilation to control exposure below applicable exposure limits. Use NIOSH/MSHA approved (30 CFR 11) or NIOSH approved (42 CFR 84) respirators in poorly ventilated areas, or if an applicable exposure limit is exceeded, or when dust causes discomfort or irritation. |

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General Hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. PHYSICAL AND CHEMICAL PROPERTIES

| Property | Value | Comments |
|---------------------------|--------------------------------------|----------|
| Appearance | Semi-fluid, flowable, granular paste | |
| Physical State | Fluid | |
| Odor | Odorless | |
| Odor Threshold | Not available | |
| pH | 12-13 in water | |
| Melting / Freeze Point | Not available | |
| Boiling Point And Range | Not available | |
| Flash Point | Not flammable. Not combustible. | |
| Evaporation Rate | Not available | |
| Flammability | Not available | |
| Flammability Limits | Not available | |
| Vapor Pressure | Not available | |
| Vapor Density | Not available | |
| Specific Gravity | 1.9-2.4 | |
| Solubility | Slight (0.1-1%) | |
| Partition Coefficient | Not available | |
| Autoignition Temperature | Not available | |
| Decomposition Temperature | Not available | |
| Viscosity | Varies | |
| Percent Volatiles | Not available | |

10. STABILITY AND REACTIVITY

Reactivity

Not expected to be reactive.

Stability

The product is stable under normal conditions of use, storage and transport.

Reactions / Polymerization

Not expected to occur.

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Conditions to Avoid

Contact with incompatible materials. When exposed to air it will absorb carbon dioxide to form calcium carbonate and magnesium oxide. When heated at temperatures above 580 deg. C, it loses water to form calcium oxide, magnesium oxide and water.

Incompatible Materials

Wet material is alkaline and will react with acids, ammonium salts, aluminum and other reactive metals. Hardened material is attacked by hydrofluoric acid releasing toxic silicon tetrafluoride gas.

Hazardous Decomposition Products

None expected under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Acute effects: Causes skin, eye and digestive tract burns.

Acute Toxicity (Inhalation LC50)

Portland cement (CAS# 65997-15-1): >1 mg/L (rat, 4hr)
Limestone (CAS# 1317-65-3): LC50 > 3 mg/L (rat, 4 hr) (Similar substance)
Calcium Hydroxide (CAS# 1305-62-0): No data available
Calcium Sulfate dehydrate (CAS# 13397-24-5): LC50 > 3.26 mg/L air (inhalation, dust, 4 h)
Magnesium Oxide (CAS# 1309-48-4): No data available.
Quartz (CAS# 14808-60-7): No data available.
Fly Ash (CAS# 68131-74-8): LC50 5.38 mg/L (rat, 4 hr) (fluidized Bed Combustion Fly Ash)
Calcium Oxide (CAS# 1305-78-8): No data available

Acute Toxicity (Oral LC50)

Portland cement (CAS# 65997-15-1): No data available.
Limestone (CAS# 1317-65-3): LD50 6450 mg/kg (rat) (similar substance)
Calcium Hydroxide (CAS# 1305-62-0): LD50 7340 mg/kg (rat)
Calcium Sulfate dehydrate (CAS# 13397-24-5): LD50 > 2000 mg/kg (rat)
Magnesium Oxide (CAS# 1309-48-4): LD50 3870 mg/kg (rat)
Quartz (CAS# 14808-60-7): LD50 500 mg/kg (rat)
Fly Ash: No data available.
Calcium Oxide (CAS# 1305-78-8): LD50 > 2000 mg/kg (rat)

Acute Toxicity (Dermal LC50)

Portland cement (CAS# 65997-15-1): No data available
Limestone (CAS# 1317-65-3): LD50 > 2000 mg/kg (Similar substance)
Calcium Hydroxide (CAS# 1305-62-0): LD50 > 2500 mg/kg
Calcium Sulfate dehydrate (CAS# 13397-24-5): No data available.
Magnesium Oxide (CAS# 1309-48-4): No data available
Quartz (CAS# 14808-60-7): No data available.
Fly Ash (CAS# 68131-74-8): LD50 > 2000 mg/kg (Rabbit)
Calcium Oxide (CAS# 1305-78-8): No data available.

Skin Corrosion/Irritation: May cause skin irritation. May cause serious burns in the presence of moisture.

Serious Eye Damage/Irritation: Causes serious eye damage. May cause burns in the presence of moisture.

Respiratory or Skin Sensitization: May cause respiratory tract irritation. The product may contain chromates, which may cause an allergic skin sensitization reaction.

Germ Cell Mutagenicity: No data available.

Carcinogenicity: Cement may contain trace amounts of respirable crystalline silica and hexavalent chromium which are

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classified by NTP and IARC as known human carcinogens.

ACGIH Carcinogens

Magnesium oxide (CAS# 1309-48-4): A4 Not classifiable as a human carcinogen.

Portland cement (CAS# 65997-15-1): A4 Not classifiable as a human carcinogen

Quartz (CAS# 14808-60-7): A2 Suspected human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Quartz (CAS# 14808-60-7): 1 Carcinogenic to humans.

US NTP Report on Carcinogens: Known carcinogen

Quartz (CAS# 14808-60-7): Known To Be Human Carcinogen.

US OSHA Specifically Regulated Substances: Cancer hazard

No data available.

Teratogenicity: No data available

Specific Target Organ Toxicity (Repeated Exposure): Quartz (CAS #14808-60-7): Category 1, route of exposure: inhalation, target organs: respiratory tract and organs.

Specific Target Organ Toxicity (Single Exposure): Calcium oxide, Magnesium oxide, Portland cement; Category 3, route of exposure: inhalation and skin contact, target organs: Respiratory tract irritation, skin irritation.

Aspiration Hazard: No data available.

Potential Health Effects: Causes serious eye damage. May cause respiratory irritation. Causes severe burns. May cause an allergic skin reaction.

Chronic effects: Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs. Some studies show excess numbers of cases of scleroderma, connective tissue disorders, lupus, rheumatoid arthritis, chronic kidney diseases and end-stage kidney disease in workers exposed to respirable crystalline silica. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled. Danger of serious damage to health by prolonged exposure.

Crystalline silica is considered a hazard by inhalation. IARC has classified crystalline silica as a Group 1 substance, carcinogenic to humans. This classification is based on the findings of laboratory animal studies (inhalation and implantation) and epidemiology studies that were considered sufficient for carcinogenicity. Excessive exposure to crystalline silica can cause silicosis, a non-cancerous lung disease. Portland cement (CAS# 65997-15-1): is not classifiable as a human carcinogen.

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.

12. ECOLOGICAL INFORMATION

Toxicity:

Data for Mixture: Ready Mix Concrete (Concrete) (CAS# Mixture)

Aquatic Toxicity- Acute Crustacea EC50 Daphnia 350 mg/l, 48 hours, estimated

Fish LC50 Fish 703.9267 mg/l, 96 hours, estimated

Data for Component: Calcium Hydroxide (CAS# #1305-62-0)

Aquatic Toxicity-Acute Gasterosteus aculeatus 96 hr LC50 = 457 mg/L

Oncorhynchus mykiss 96 hr LC50 = 50.6 mg/L

Crangon septemspinosa 96 hr LC50 = 158 mg/L

Daphnia magna 48 hr EC50 = 49.1 mg/L

Daphnia magna 48 h EC50 > 100 mg/L

Danio rerio 96 h LC50 > 11.1 mg/L

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| | |
|--------------------------|--|
| Aquatic Toxicity-Chronic | Crangon septemspinosa 14 d NOEC = 32 mg/L |
| Data for Component: | Calcium sulfate dihydrate (CAS# 13397-24-5) |
| Aquatic Toxicity-Acute | Fish LC50 Fathead minnow (Pimephales promelas) > 1970 mg/l, 96 hours |
| Data for Component: | Calcium oxide (CAS#1305-78-8) |
| Aquatic Toxicity-Acute | Cyprinus carpio 96 hr LC50 = 1070 mg/L |
| Aquatic Toxicity-Chronic | Tilapia nilotica 46 days NOEC = 100 mg/L |
| Data for Component: | Quartz (CAS# 14808-60-7) |
| Aquatic Toxicity- Acute | Daphnia magna 24 hr LL50 > 10000 mg/L Danio rerio 96 hr LLO = 10000 mg/L Daphnia magna 48 hr EC50 > 100 mg/L (similar substance) Desmodesmus subspicatus 72 hr EC50 > 14 mg/L (similar substance) |

Persistence and Degradation: Persistent
Bioaccumulative Potential: Not Bioaccumulative
Mobility in Soil: No data available.
Other Adverse Effects: No data available.
Other Information: No data available.

13. DISPOSAL CONSIDERATIONS

The generation of waste should be avoided or minimized wherever possible. Disposal of 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Untreated waste should not be released to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe manner. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff, and contact with soil, waterways, drains and sewers.

14. TRANSPORT INFORMATION

US DOT

| | |
|---|---------------|
| UN Identification Number | Not regulated |
| Proper Shipping Name | Not available |
| Hazard Class and Packing Group | Not available |
| Shipping Label | Not available |
| Placard / Bulk Package | Not available |
| Emergency Response Guidebook Guide Number | Not available |

IATA Cargo

| | |
|--------------------------------|---------------|
| UN Identification Number | Not regulated |
| Shipping Name / Description | Not available |
| Hazard Class and Packing Group | Not available |
| ICAO Label | Not available |
| Packing Instructions Cargo | Not available |
| Max Quantity Per Package Cargo | Not available |

IATA Passenger

| | |
|--------------------------------|---------------|
| UN Identification Number | Not regulated |
| Shipping Name / Description | Not available |
| Hazard Class and Packing Group | Not available |
| ICAO Label | Not available |
| Packing Instructions Passenger | Not available |

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Max Quantity Per Package Not available

IMDG

UN Identification Number Not regulated
 Shipping Name / Description Not available
 Hazard Class and Packing Group Not available
 IMDG Label Not available
 EmS Number Not available
 Marine Pollutant Not available

15. REGULATORY INFORMATION

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

U.S. Federal, State, and Local Regulatory Information

U.S. Toxic Substances Control Act

All components are on the U.S. EPA TSCA Inventory List
 TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)

This product is not listed as a CERCLA substance.

SARA Section 313- Supplier Notification

This product contains the following chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372:

| Component name | Component ID | Typical level, % | De minimis % Limit* |
|----------------|--------------|------------------|--|
| Mercury | 7439-97-6 | 0.00003 | There are no <i>de minimis</i> levels for chemicals of special concern |
| Lead | 7439-92-1 | 0.0008 | |

*This product may contain trace amounts of naturally occurring toxic chemicals eligible for the de minimis reporting requirements including: Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Manganese, Nickel, Selenium, Silver, Thallium, Zinc.

Clean Air Act Section 112 (b): Hazardous Air Pollutants (HAPs) — Not listed

Clean Air Act Section 602: Class I Substances — Not listed

Clean Air Act Section 602: Class II Substances — Not listed

DEA List I Chemicals: (Precursor Chemicals) — Not listed

DEA List II Chemicals: (Essential Chemicals) — Not listed

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate Hazard (Acute) - Yes

Delayed Hazard (Chronic) – Yes

Fire Hazard - No

Pressure Hazard - No

Reactivity Hazard - No

Section 302 extremely hazardous substance (40 CRF 355, Appendix A)-No

State regulations WARNING: This product contains chemical(s) known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Hazardous Substances (Director's):

Calcium Hydroxide (CAS# 1305-62-0)

Calcium oxide (CAS# 1305-78-8)

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Magnesium oxide (CAS# 1309-48-4)

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT):

Quartz (CAS# 14808-60-7)

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Quartz (CAS# 14808-60-7) Listed: October 1, 1988 Carcinogenic.

US - New Jersey RTK - Substances:

Calcium Hydroxide (CAS# 1305-62-0)

Calcium oxide (CAS# 1305-78-8) Listed.

Calcium sulfate dihydrate (CAS# 13397-24-5)

Limestone (CAS# 1317-65-3)

Magnesium oxide (CAS# 1309-48-4)

Portland cement (CAS# 65997-15-1)

Quartz (CAS# 14808-60-7)

US - Pennsylvania RTK - Hazardous Substances:

Calcium Hydroxide (CAS# 1305-62-0)

Calcium oxide (CAS# 1305-78-8)

Calcium sulfate dihydrate (CAS# 13397-24-5)

Limestone (CAS# 1317-65-3)

Magnesium oxide (CAS# 1309-48-4)

Portland cement (CAS# 65997-15-1)

Quartz (CAS# 14808-60-7)

US - Pennsylvania RTK - Hazardous Substances: Special hazard

Calcium Hydroxide (CAS# 1305-62-0)

Calcium oxide (CAS# 1305-78-8)

Calcium sulfate dihydrate (CAS# 13397-24-5)

Limestone (CAS# 1317-65-3)

Magnesium oxide (CAS# 1309-48-4)

Portland cement (CAS# 65997-15-1)

Quartz (CAS# 14808-60-7)

Canadian Regulatory Information

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS status

Controlled

WHMIS classification

E – Corrosive

WHMIS labeling



| Inventory status | Country(s) or region | Inventory name | On inventory (yes/no)* |
|------------------|----------------------|--|------------------------|
| Australia | Australia | Inventory of Chemical Substances (AICS) | Yes |
| Canada | Canada | Domestic Substances List (DSL) | No |
| Canada | Canada | Non-Domestic Substances List (NDSL) | Yes |
| China | China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | Europe | European List of Notified Chemical Substances (ELINCS) | No |

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| | | |
|-----------------------------|---|-----|
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | No |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | No |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | No |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. OTHER INFORMATION

HMIS® Health rating including an * indicates a chronic hazard

HMIS® ratings

Health: 3*

Flammability: 0

Physical hazard: 1

NFPA ratings

Health: 3

Flammability: 0

Instability: 1

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Prior Issue Date 06/15/2020

Description of Revisions

Revised Section 1 with new contact name.

Revised Section 3 with addition of statement regarding naturally occurring trace compounds.

Revised format of Section 8.

Revised Section 15.

Notice to reader

While the information provided in this 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. In particular, 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 working on Portland cement products, for example, Portland cement concrete.

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY (Argos USA LLC), except that the product shall conform to contracted specifications. The information provided herein was believed by the (Argos USA LLC) to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information to comply with all laws and procedures applicable to the safe handling and use of product and to determine the suitability of the product for its intended use. Buyer's exclusive remedy shall be for damages and no claim of any kind, whether as to product delivered or for non-delivery of product, and whether based on contract, breach of warranty, negligence, or otherwise shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

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Argos Ready Mix Concrete (Concrete)



Abbreviations

ACGIH — American Conference of Governmental Industrial Hygienists
CAS# — Chemical Abstract Service
CERCLA — Comprehensive Emergency Response and Comprehensive Liability Act
CFR — Code of Federal Regulations
DOT — Department of Transportation
GHS — Globally Harmonized System
HEPA — High Efficiency Particulate Air
IATA — International Air Transport Association
IARC — International Agency for Research on Cancer
IMDG — International Maritime Dangerous Goods
NIOSH — National Institute of Occupational Safety and Health
NOEC — No Observed Effect Concentration
NTP — National Toxicology Program
OSHA — Occupational Safety and Health Administration
PEL — Permissible Exposure Limit
REL — Recommended Exposure Limit
RQ — Reportable Quantity
SARA — Superfund Amendments and Reauthorization Act
SDS — Safety Data Sheet
TLV — Threshold Limit Value
TPQ — Threshold Planning Quantity
TSCA — Toxic Substances Control Act
TWA — Time-Weighted Average
UN — United Nations

Disclaimer Statement

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** End of Safety Data Sheet **