MASONRY

-Concrete
-Lime
-Muriatic Acid
-Mortar
-Sand

Hazard Description:

Heat resistant refractory brick (firebrick) used as boiler, incinerator and laboratory oven lining contains silica, asbestos, iron oxide or alumina. Ceramic brick has a high lead content. Care should be exercised when handling or cutting these materials.

During construction or demolition projects, the cutting, removal or installation of refractory materials may generate hazardous dusts. In these cases, the use of respiratory protection is recommended for those workers handling these materials, as well as other workers who may be exposed to these dusts.

Muriatic acid, in undiluted form, is corrosive and irritating to the skin, eyes and mucous membranes. Overexposure can result in pulmonary edema (blistering of the lungs). Dilute muriatic acid, which is commonly used in the cleaning of concrete or brick, may cause mild eye, skin and respiratory tract irritation. Protective gloves and chemical goggles are recommended.

Lime, or calcium oxide, used in concrete and mortar is corrosive. It is a skin, eye and mucous membrane irritant. Keep it off of your skin and out of your eyes, nose, throat and lungs.

Silica is found in ceramics and abrasives, concrete and grouts. Prolonged exposure to dusts containing silica can result in silicosis, a lung condition characterized by shortness of breath.

For additional information regarding the health hazards posed by the dusts resulting from abrasive work, see the section on Abrasives.

Protect yourself from these chemicals by reading the labels and following the recommended precautions. Wear gloves and eye protection, and avoid inhaling the vapors and mists. Wash your hands and face thoroughly before eating, drinking or smoking.

Specific emergency procedures for each chemical will be detailed on the Material Safety Data Sheet. In general, if a powdered or liquid refractory or masonry material gets into your eyes, flush the affected eye with clean running water for at least 15 minutes, then seek medical attention. If it gets on your skin, wash the area of contact and seek medical attention.

If a masonry chemical is spilled, refer to the MSDS for specific cleanup and disposal information.

Because of the variety of masonry materials in use, signs and symptoms of overexposure will vary. Read the MSDS for the particular product you are using.

QUIKRETE
CEMENT & CONCRETE PRODUCTS™

C6: Portland Cement Based Concrete Products

SAFETY DATA SHEET
(Complies with OSHA 29 CFR 1910.1200)

SECTION I: PRODUCT IDENTIFICATION

The QUIKRETE® Companies
One Securities Centre
3490 Piedmont Road, Suite 1300
Atlanta, GA 30305
Revision: Jan-16
SDS C6

Emergency Telephone Number
(770) 216-9580
Information Telephone Number
(770) 216-9580

QUIKRETE® Product Name	Item #(s)
Fast-Setting Concrete Mix	1004-50
All-Star Fast Setting Concrete Mix	1004-50
Commercial Grade FastSet™ Concrete Mix	1004-51
Post Haste	1004-65
Q-MAX Pro Concrete Mix	1004-81
All-Star 10 Minute Instant Post Mix	1005-51
FastSet™ Water-Stop Cement –Zip & Mix	1121-15
Commercial Grade FastSet™ Cement	1124-92
Hydraulic Water Stop	1126-00
Concrete Resurfacer	1131-40
Multipurpose Concrete Resurfacer	1131-45
Bonded Topping Mix	1133-04, 1018, 1017
Architectural Finish	1220-55
Quick Setting Cement	1240-00
Commercial Grade FastSet™ Repair Mortar – Zip And Mix	1241
Commercial Grade FastSet™ Repair Mortar	1241-60
Rapid Road Repair	1242-50, -51, -52, -80
Polymer Modified Structural Concrete – Extended Set	1242-85
Rapid Hardening Sand Mix	1243-50
Commercial Grade FastSet™ DOT Mix	1244-56
Commercial Grade FastSet™ DOT Deck Repair – Polymer Modified	1244-58
Commercial Grade FastSet™ DOT Mix – Extended	1244-81
Exterior use Anchoring Cement	1245-80, -81
Commercial Grade FastSet™ Non-Shrink Grout	1585-09, -20
Commercial Grade FastSet™ All-Crete	1585-59
Mix 801 FastSet™ DOT PM Overlay	NR801552/80801552

Product Use: Portland cement-based, rapid-setting materials for general construction or repair.

SECTION II - HAZARD IDENTIFICATION

Hazard-determining components of labeling: Silica, Portland cement

2.1 Classification of the substance or mixture

Carcinogen – Category 1A
Skin Corrosion – Category 1B
Skin Sensitization – Category 1B
Specific Target Organ Toxicity Repeat Exposure – Category 1
Specific Target Organ Toxicity: Single Exposure – Category 3

2.2a Signal word DANGER!

2.2b Hazard Statements

May cause cancer through chronic inhalation
Causes severe skin burns and serious eye damage
May cause an allergic skin reaction
Causes damage to lungs through prolonged or repeated inhalation
May cause respiratory irritation

2.2c Pictograms

2.2d Precautionary statements

Do not handle until all safety precautions have been read and understood.
Wear impervious gloves, such as nitrile. Wear eye protection, and protective clothing.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.
Use only in a well-ventilated area.
Do not breathe dust.

If swallowed: Rinse mouth. Do NOT induce vomiting.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If on skin (or hair): Remove immediately all contaminated clothing and wash before re-use. Rinse skin or hair with water.
If significant skin irritation or rash occurs: get medical advice or attention.
Immediately seek medical advice or attention if symptoms are significant or persist.

Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/containers in accordance with all regulations.

2.3 Additional Information
The Portland cement in this product can cause serious, potentially irreversible damage to skin, eye, respiratory and digestive tracts due to chemical (caustic) burns, including third degree burns. Burns from Portland cement may not cause immediate pain or discomfort. You cannot rely on pain to alert you to cement burns. Therefore precautions must be taken to prevent all contact with Portland cement. Cement burns can become worse even after contact has ended. If there is contact with this product, immediately remove all product from body and thoroughly rinse with water. If you experience or suspect a cement burn or inflammation you should immediately see a health care professional.

Skin burns and irritation may be caused by brief exposure, though often are caused by extended exposure of 15 minutes, an hour, or longer. Interaction of Portland cement with water or sweat releases a caustic solution which produces the burns or irritation. Any extended exposure should be treated as though a burn has occurred until determined otherwise.

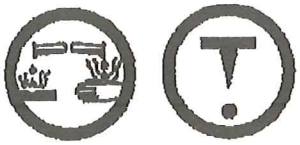
Skin contact with Portland cement can also cause inflammation of the skin, referred to as dermatitis. Signs and symptoms of dermatitis can include itching, redness, swelling, blisters, scaling, and other changes in the normal condition of the skin. Signs and symptoms of burns include the above and whitening, yellowing, blackening, peeling or cracking of skin.

The Portland cement in this product may cause allergic contact dermatitis in sensitized individuals. This overreaction of the immune system can lead to severe inflammation. Sensitization may result from a single exposure to the low levels of Cr(VI) in Portland cement or repeated exposures over months or years. Sensitization is long lasting and, after sensitization, even very small quantities can trigger the dermatitis. Sensitization is uncommon. Individuals who experience skin problems, including seemingly minor ones, are advised to seek medical attention.

2.3a HNOC – Hazards not otherwise classified: Not applicable

2.3b Unknown Acute Toxicity: None
2.3C WHMIS Classification
Class D2B – Skin/Eye Irritant
Class D2A – Chronic Toxic Effects – Carcinogen
Class E – Corrosive Material

2.3d Label Elements According To WHMIS
Hazard Symbols



Signal Word
DANGER!

SECTION III - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components	CAS No.	% by Weight
Sand, Silica, Quartz	14808-60-7	40-70*
Portland Cement	65997 15 1	10-30*
Calcium Sulfoaluminate	65997-16-2	10-30*
Calcium Aluminate	12042-68-1	5-10*
Calcium Sulfate	10101-41-4	1-5*
Limestone Dust	01317-65-3	1-5*

*The concentrations ranges are provided due to batch-to-batch variability.
None of the constituents of this material are of unknown toxicity.

SECTION IV – FIRST AID MEASURES

4.1 Description of the first-aid measures
General information:
After inhalation: Remove person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. In case of unconsciousness, place patient stably in side position for transportation.
After skin contact: Wash skin with cool water and pH-neutral soap or a mild detergent. If significant skin irritation or rash occurs: get medical advice or attention.
After eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
After swallowing: Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms/effects, acute and delayed
Inhalation: May cause respiratory tract irritation. Causes damage to organs through prolonged or repeated inhalation. This product contains crystalline silica. Prolonged or repeated inhalation of respirable silica from this product can cause silicosis.

Skin contact: The Portland cement in this product can cause serious, potentially irreversible damage to skin, eye, respiratory and digestive tracts due to chemical (caustic) burns, including third degree burns.

Burns from Portland cement may not cause immediate pain or discomfort. You cannot rely on pain to alert you to cement burns. Therefore precautions must be taken to prevent all contact with Portland cement. Cement burns can become worse even after contact has ended. If there is contact with this product, immediately remove all product from body and thoroughly rinse with water. If you experience or suspect a cement burn or inflammation you should immediately see a health care professional.

Skin burns and irritation may be caused by brief exposure, though often are caused by extended exposure of 15 minutes, an hour, or longer. Interaction of Portland cement with water or sweat releases a caustic solution which produces the burns or irritation. Any extended exposure should be treated as though a burn has occurred until determined otherwise.

Skin contact with Portland cement can also cause inflammation of the skin, referred to as dermatitis. Signs and symptoms of dermatitis can include itching, redness, swelling, blisters, scaling, and other changes in the normal condition of the skin. Signs and symptoms of burns include the above and whitening, yellowing, blackening, peeling or cracking of skin.

The Portland cement in this product may cause allergic contact dermatitis in sensitized individuals. This overreaction of the immune system can lead to severe inflammation. Sensitization may result from a single exposure to the low levels of Cr(VI) in Portland cement or repeated exposures over months or years. Sensitization is long lasting and, after sensitization, even very small quantities can trigger the dermatitis. Sensitization is uncommon. Individuals who experience skin problems, including seemingly minor ones, are advised to seek medical attention.

Eye Contact: Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Ingestion: May be harmful if swallowed. Ingestion may cause discomfort and/or distress, nausea or vomiting.

4.3 Indication of immediate medical attention and special treatment needed:
Immediately seek medical advice or attention if symptoms are significant or persist.

SECTION V - FIRE FIGHTING MEASURES

5.1 Flammability of the Product: Non-flammable and non-combustible
5.2 Suitable extinguishing agents: Treat for surrounding material
5.3 Special hazards arising from the substance or mixture: None
5.3a Products of Combustion: None
5.3b Explosion Hazards in Presence of Various Substances: Non-explosive in presence of shocks

SECTION VI – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Wear personal protective equipment (See section VIII). Keep unprotected persons away.

6.2 Methods and material for containment and cleaning up:
Do not allow to enter sewers/ surface or ground water. Dispose of unwanted materials and containers properly in accordance with all regulations.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND STORAGE

7.1 Handling
Precautions for safe handling: Ensure good ventilation/exhaustion at the workplace. DO NOT BREATHE DUST. In dusty environments, the use of an OSHA, MSHA or NIOSH approved respirator and tight fitting goggles is recommended. Wear appropriate PPE (See section 8).Do not mix with other chemical products, except as indicated by the manufacturer. Do not get in eyes, on skin or clothing. Good housekeeping is important to prevent accumulation of dust.

7.2 Storage
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: Keep out of the reach of children. Keep container tightly closed and prevent exposure to humidity. Do not allow water to contact the product until time of use to preserve product utility.

SECTION VIII – EXPOSURE CONTROL MEASURES / PERSONAL PROTECTION

8.1 Components with limit values that require monitoring at the workplace:

Hazardous Components	CAS No.	PEL (OSHA) mg/M^3	TLV (ACGIH) mg/M^3
Silica Sand, crystalline	14808-60-7	0.1	0.025 (resp)
Portland Cement	65997-15-1	5 (resp) 15 (total)	10 (resp)
Calcium Sulfoaluminate	65997-16-2	15	10
Calcium Aluminate	12042-68-1	5 (resp) 15 (total)	1 (resp)
Calcium Sulfate	10101-41-4	5 (resp) 15 (total)	10 (resp)
Limestone Dust	01317-65-3	5 (resp) 15 (total)	10 (resp)

8.2 Exposure Controls
Use ventilation adequate to keep exposures below recommended exposure limits.

8.3 General protective and hygienic measures

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

8.3a Personal protective equipment

Protection of hands:
Wear gloves of adequate length to offer appropriate skin protection from splashes. Nitrile, Butyl and PVC gloves have been found to offer adequate protection for incidental contact. Precautions must be observed because burns occur with little warning -- little heat is sensed.

Eye protection:
Wear approved eye protection properly fitted dust- or splash-proof chemical safety glasses.

Respiratory protection:
A NIOSH-approved dust mask or filtering face piece is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. Respirators should be selected by and used under the direction of a trained health and safety professional, following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2).

SECTION IX - PHYSICAL/CHEMICAL CHARACTERISTICS

General Information

Appearance	Form: Granular Solid Color: Gray to gray-brown colored Odor: None
pH-value at 20°C (68 °F):	13 (10%)
Boiling point/Boiling range:	Not applicable
Flash point:	Not applicable
Auto igniting:	Product is not self-igniting
Vapor pressure at 21°C (70°F)	Not available
Density at 25°C (77 °F):	2.6 to 3.15

Solubility in / Miscibility with Water:	Insoluble
VOC content:	0 g/L VOC

SECTION X – STABILITY AND REACTIVITY

10.1 Reactivity
No dangerous reaction known under conditions of normal use.
10.2 Chemical stability
Stable under normal storage conditions. Keep in dry storage.

10.3 Possibility of hazardous reaction
No dangerous reaction known under conditions of normal use.
10.4 Thermal decomposition / conditions to be avoided
No decomposition if used according to specifications.
10.5 Incompatible materials
Contact of silica with powerful oxidizing agents such as fluorine, chlorine trifluoride, manganese trioxide, or oxygen difluoride may cause fires
10.6 Hazardous Decomposition or By-products
Silica will dissolve in Hydrofluoric Acid and produce a corrosive gas – silicon tetrafluoride.

SECTION XI – TOXICOLOGICAL INFORMATION

11.1 Exposure Routes: Skin contact, skin adsorption, eye contact, inhalation, or ingestion.

11.2 Symptoms related to physical/chemical/toxicological characteristics:

Inhalation: May cause respiratory tract irritation. Causes damage to organs through prolonged or repeated exposure. This product contains crystalline silica. Prolonged or repeated inhalation of respirable silica from this product can cause silicosis.

Skin contact: Causes skin irritation. Handling can cause dry skin, discomfort, irritation, and dermatitis. May cause sensitization by skin contact. Product becomes extremely alkaline when exposed to moisture, and can cause alkali burns and affect the mucous membranes.

Eye Contact: Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Ingestion: Harmful if swallowed. Ingestion may cause discomfort and/or distress, nausea or vomiting.

11.3 Delayed, immediate and chronic effects of short-term and long-term exposure
Short Term

Skin Corrosion/Irritation: Causes severe skin burns.
Serious Eye Damage/Irritation: Causes severe eye damage.
Respiratory Sensitization: Not available
Skin Sensitization: May cause an allergic skin reaction.
Specific Target Organ Toxicity-Single Exposure: (Category 3) may cause respiratory irritation.
Aspiration Hazard: Not available

Long Term

Carcinogenicity: May cause cancer through chronic inhalation.
Germ Cell Mutagenicity: Not available
Reproductive Toxicity: Not available

Specific Target Organ Toxicity- Repeated Exposure: (Category 1) Causes damage to lungs through prolonged/repeated exposure
Synergistic/Antagonistic Effects: Not available.

SECTION XII – ECOLOGICAL INFORMATION

12.1 Ecotoxicity
May cause long-term adverse effects to the aquatic environment. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach bodies of water or drainage ditch undiluted or un-neutralized

12.2 Persistence and degradability
No further relevant information available.

12.3 Bioaccumulative potential:
No further relevant information available.

12.4 Mobility in soil
No further relevant information available.

12.5 Other Adverse Effects
No further relevant information available.

SECTION XIII – DISPOSAL CONSIDERATIONS

13.1 Waste Disposal Method
The packaging and material may be land filled; however, material should be covered to minimize generation of airborne dust. This product is not classified as a hazardous waste under the authority of the RCRA (40CFR 261) or CERCLA (40CFR 117&302). Disposal must be made in accordance with local, state and federal regulations.

13.2 Other disposal considerations
Uncleaned packaging
Recommendation: Disposal must be made in accordance with local, state and federal regulations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION XIV – TRANSPORT INFORMATION

	DOT (U.S.)	TDG (Canada)
UN-Number	Not Regulated	Not Regulated
UN proper shipping name	Not Regulated	Not Regulated
Transport Hazard Class(es)	Not Regulated	Not Regulated
Packing Group (if applicable)	Not Regulated	Not Regulated

14.1 Environmental hazards:
Not Available

14.2 Transport in bulk according to Annex II of Marpol 73/78 and the IBC Code
Not available

14.3 Special precautions for user
Do not handle until all safety precautions have been read and understood.

SECTION XV – OTHER REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislations specific for the chemical

Canada
WHMIS Classification: Considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations and subject to the requirements of Health Canada's Workplace Hazardous Material Information (WHMIS). This document complies with the WHMIS requirements of the Hazardous Products Act (HPA) and the CPR.

15.2 US Federal Information

SARA 302/311/312/313 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302, 311, 312 or 313.
RCRA: Crystalline silica (quartz) is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR §261 et seq.
CERCLA: Crystalline silica (quartz) is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 40 CFR §302.
Emergency Planning and Community Right to Know Act (SARA Title III): Crystalline silica (quartz) is not an extremely hazardous substance under Section 302 and is not a toxic chemical subject to the requirements of Section 313.
FDA: Silica is included in the list of substances that may be included in coatings used in food contact surfaces, 21 CFR §175.300(b)(3)(xxvi).
NTP: Respirable crystalline silica, primarily quartz dusts occurring in industrial and occupational settings, is classified as Known to be a Human Carcinogen.
OSHA Carcinogen: Crystalline silica (quartz) is not listed.

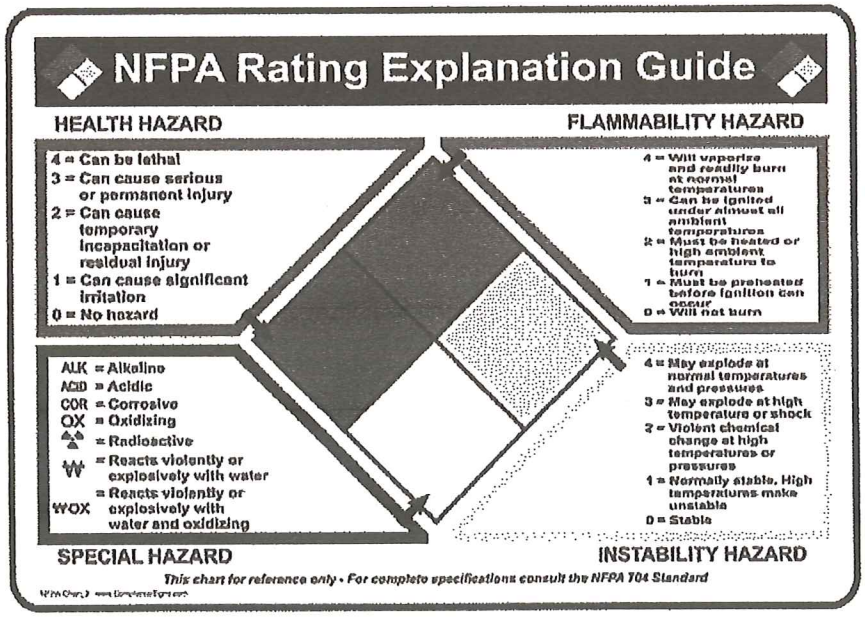
15.3 State Right to Know Laws

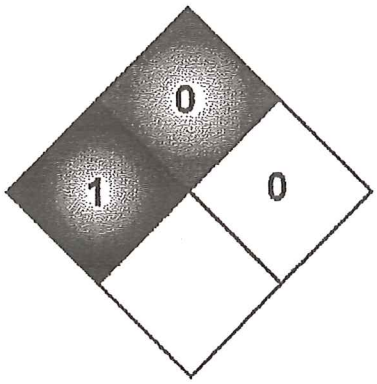
California Prop. 65 Components
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
California Inhalation Reference Exposure Level (REL): California established a chronic REL of 3 µg for silica (crystalline, respirable). A chronic REL is an airborne level of a substance at or below which no adverse health effects are anticipated in individuals indefinitely exposed to the substance at that level.
Massachusetts Toxic Use Reduction Act: Silica, crystalline (respirable size, <10 microns) is "toxic" for purposes of the Massachusetts Toxic Use Reduction Act.

15.4 Global Inventories

DSL All components of this product are on the Canadian DSL list.
TSCA No.: Crystalline silica (quartz) appears on the EPA TSCA inventory under the CAS No. 14808-60-7. All constituents are listed in the TSCA inventory.

15.5 NFPA Ratings





SECTION XVI – OTHER INFORMATION

Last Updated: January 4, 2016

QUIKRETE®

CEMENT & CONCRETE PRODUCTS™

NOTE: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products.

Prepared by

The QUIKRETE® Companies
Phone (800) 282-5828
www.QUIKRETE.com

End of SDS

QUIKRETE
CEMENT & CONCRETE PRODUCTS™

A3: Water Based Products

SAFETY DATA SHEET
(Complies with OSHA 29 CFR 1910.1200)

SECTION I: PRODUCT IDENTIFICATION

The QUIKRETE® Companies
One Securities Centre
3490 Piedmont Road, Suite 1300
Atlanta, GA 30305

Emergency Telephone Number
(770) 216-9580
Information Telephone Number
(770) 216-9580

MSDS A3
Revision: May-15

QUIKRETE® Product Name	Code #
CONCRETE ACRYLIC FORTIFIER	8610
CONCRETE ACRYLIC FORTIFIER, CONCENTRATED	8611

PRODUCT USE: LATEX ADDITIVE FOR MODIFYING PORTLAND CEMENT-BASED PRODUCTS

SECTION II - HAZARD IDENTIFICATION

Hazard-determining components of labeling: Acrylic polymer
2.1 Classification of the substance or mixture
Eye Irritation – Category 2B
Skin Sensitization – Category 1B
Specific Target Organ Toxicity – Single Exposure- Category 3
Acute Oral Toxicity – Category 4

2.2a Signal word Warning

2.2b Hazard Statements
Causes eye irritation
May cause an allergic skin reaction
May cause respiratory, eye or gastrointestinal irritation.
Prolonged or repeated exposure may cause skin irritation
Harmful if swallowed.

2.2c Pictograms

2.2d Precautionary statements
Do not handle until all safety precautions have been read and understood.
Wear impervious gloves, such as nitrile. Wear eye protection, and protective clothing.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.
Use only in a well-ventilated area.
Do not breathe vapors.

If on skin (or hair): Remove immediately all contaminated clothing and wash before re-use. Rinse skin or hair with water.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If swallowed: Rinse mouth, do NOT induce vomiting.
If significant skin irritation or rash occurs: get medical advice or attention.

Immediately seek medical advice or attention if symptoms are significant or persist.

Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/containers in accordance with all regulations.

2.3 Additional Information
2.3a HNOC – Hazards not otherwise classified: Not applicable

2.3b Unknown Acute Toxicity: None
2.3c WHMIS Classification
Class D2B – Skin/Eye Irritant

2.3d Label Elements According To WHMIS
Hazard Symbols

Signal Word
Warning

SECTION III - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components	CAS No.	% by Weight
Polymeric Resin	Not Hazardous	30-60
Water	7732-18-5	40-70

Composition ranges are provided due to batch-to-batch variability.
None of the constituents of this product are of unknown toxicity.

SECTION IV – FIRST AID MEASURES

General information:
Immediately remove any clothing soiled by the product.
After inhalation: In case of unconsciousness place patient stably in side position for transportation.
After skin contact: Remove immediately all contaminated clothing and wash before re-use. Rinse skin or hair with water.
After eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
After swallowing: Treat symptomatically and supportively. Get medical attention. Never give anything by mouth to an unconscious person.
Acute/Delayed Symptoms: Immediately seek medical advice or attention if symptoms are significant or persist.

SECTION V - FIRE FIGHTING MEASURES

5.1 Flammability of the Product: This is a water-based product and presents no particular fire or explosion hazard. Dry polymer film will burn. Product contains low levels of organic volatiles which may be emitted at elevated temperatures.

5.2 Suitable extinguishing agents: Treat for surrounding material

5.3 Special hazards arising from the substance or mixture: None

5.3a Products of Combustion: None

5.3b Explosion Hazards in Presence of Various Substances: Non-explosive in presence of shocks

SECTION VI – ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Wear protective equipment (See section VIII). Keep unprotected persons away.

Environmental precautions: Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up:
Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND STORAGE

Handling
Precautions for safe handling: Ensure good ventilation/exhaustion at the workplace. Wear appropriate PPE (See section 8).

Information about protection against explosions and fires: No special measures required.

Storage
Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Not required.

Further information about storage conditions: Keep receptacle tightly sealed.

Specific end use(s): No further relevant information available

SECTION VIII – EXPOSURE CONTROL MEASURES / PERSONAL PROTECTION

8.1 Components with limit values that require monitoring at the workplace:

Hazardous Components	CAS No.	PEL (OSHA) mg/M^3	TLV (ACGIH) mg/M^3
None			

8.2 Exposure Controls
Use ventilation adequate to keep exposures below recommended exposure limits.

8.3 General protective and hygienic measures
Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

8.3a Personal protective equipment

Protection of hands:
Wear gloves of adequate length to offer appropriate skin protection from splashes. Nitrile, Butyl and PVC gloves have been found to offer adequate protection for incidental contact.

Eye protection:
Wear approved eye protection (properly fitted dust- or splash-proof chemical safety glasses.

Respiratory protection:
Not required under typical use

SECTION IX - PHYSICAL/CHEMICAL CHARACTERISTICS

General Information	
Appearance	Form: Liquid Color: White Odor: Slight Ammonia
pH-value at 20°C (68 °F):	9.5-10.0
Boiling point/Boiling range:	>212°F (>100°C)
Auto igniting:	Product is not self-igniting.
Vapor pressure at 21°C (70°F)	<1 (water)
Density at 25°C (77 °F):	1.0 to 1.2
Solubility in / Miscibility with Water:	Miscible
VOC content:	18 g/L VOC

SECTION X – STABILITY AND REACTIVITY

Thermal decomposition / conditions to be avoided: Strong oxidizers, materials that react with water

Incompatible materials: Strong oxidizing agents

Hazardous decomposition products: None

SECTION XI – TOXICOLOGICAL INFORMATION

11.1 Exposure Routes: Skin contact, skin adsorption, eye contact, inhalation, or ingestion.

11.2 Symptoms related to physical/chemical/toxicological characteristics:

Inhalation: May cause respiratory tract irritation.

Skin contact: Causes skin irritation.

Eye Contact: Causes eye irritation.

Ingestion: May cause gastrointestinal irritation

11.3 Delayed, immediate and chronic effects of short-term and long-term exposure

Short Term

Skin Corrosion/Irritation: Causes skin irritation.
Serious Eye Damage/Irritation: Causes eye irritation.
Respiratory Sensitization: Not available
Skin Sensitization: May cause an allergic skin reaction.
Specific Target Organ Toxicity-Single Exposure: (Category 3) May cause respiratory irritation.
Aspiration Hazard: Not available

Long Term

Carcinogenicity: Not available
Germ Cell Mutagenicity: Not available
Reproductive Toxicity: Not available
Specific Target Organ Toxicity- Repeated Exposure: (Category 2) Prolonged or repeated exposure may cause skin irritation.
Synergistic/Antagonistic Effects: Not available.

SECTION XII – ECOLOGICAL INFORMATION

Aquatic toxicity: No further relevant information available.
Persistence and degradability: No further relevant information available.
Behavior in environmental systems:
Bioaccumulative potential: No further relevant information available.
Additional ecological information:

General notes:
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach bodies of water or drainage ditch undiluted or un-neutralized

SECTION XIII – DISPOSAL CONSIDERATIONS

Waste treatment methods
Recommendation:
Do not allow product to reach waterways or storm sewers. Disposal must be made in accordance with local, state and federal regulations.
Uncleaned packaging
Recommendation: Disposal must be made in accordance with local, state and federal regulations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION XIV – TRANSPORT INFORMATION

	DOT (U.S.)	TDG (Canada)
UN-Number	Not Regulated	Not Regulated
UN proper shipping name	Not Regulated	Not Regulated
Transport Hazard Class(es)	Not Regulated	Not Regulated
Packing Group (if applicable)	Not Regulated	Not Regulated

14.1 Environmental hazards:
Not Available

14.2 Transport in bulk according to Annex II of Marpol 73/78 and the IBC Code
Not available

14.3 Special precautions for user
Do not handle until all safety precautions have been read and understood.

SECTION XV – OTHER REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislations specific for the chemical

Canada
WHMIS Classification: Considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations and subject to the requirements of Health Canada's Workplace Hazardous Material Information (WHMIS). This document complies with the WHMIS requirements of the Hazardous Products Act (HPA) and the CPR.

15.2 US Federal Information

SARA 302/311/312/313 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302, 311, 312 or 313.
RCRA: Not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR §261 et seq.
CERCLA: Not classified as a hazardous substance under regulations of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 40 CFR §302.
Emergency Planning and Community Right to Know Act (SARA Title III): Not an extremely hazardous substance under Section 302 and is not a toxic chemical subject to the requirements of Section 313.
NTP: Not classified as Known to be a Human Carcinogen.
OSHA Carcinogen: Not listed.

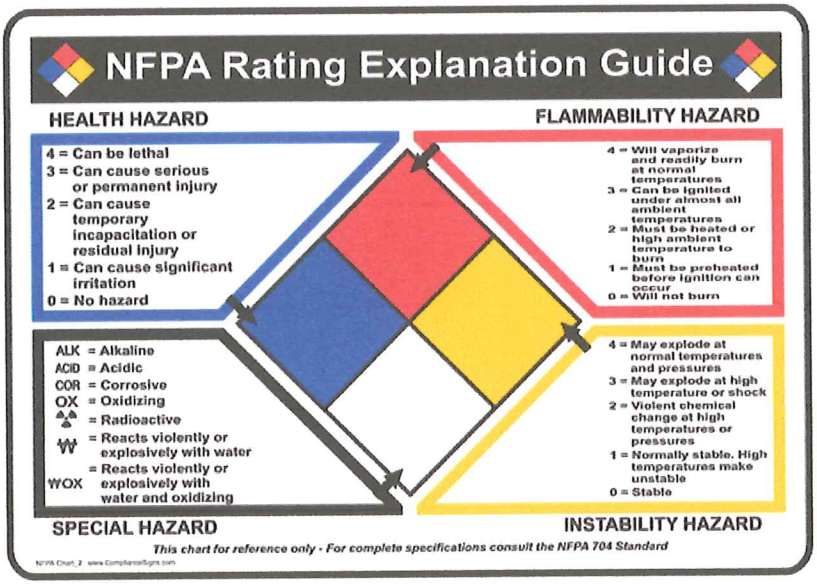
15.3 State Right to Know Laws

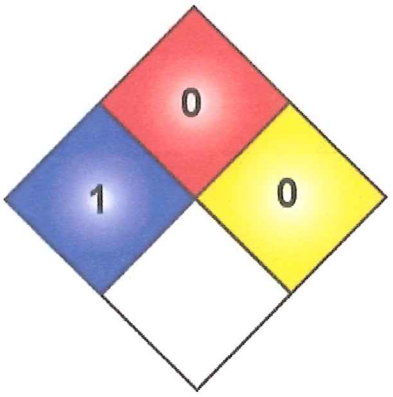
California Prop. 65 Components
WARNING: This product does not contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

15.4 Global Inventories

DSL All components of this product are on the Canadian DSL list.
TSCA No.: All constituents are listed in the TSCA inventory.

15.5 NFPA Ratings





SECTION XVI – OTHER INFORMATION

Last Updated: May 27, 2015

NOTE: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products.

Prepared by The QUIKRETE® Companies
Phone (800) 282-5828
www.QUIKRETE.com

End of SDS

Safety Data Sheet

Quicklime

Revision date:
June 24, 2015

1. Identification

Product Name: Quicklime

Synonyms:

Agricultural Lime,	PCC Grade-Small Rescreened,
Cal 85,	PCC Lime Burning,
Dryox,	PCC,
Hi Cal Quicklime - Small Pebble,	Pulverized Lime with Flowaid,
Hi Cal Quicklime Fines,	Quicklime Fines,
Hi Cal Quicklime,	Rice,
Hi Cal Steel Grade,	Stabilime 50-50,
Hi Calcium Pulverized W/FLO Aid,	Stabilime Blend 70-30,
Hi Calcium Quicklime Water Grade,	Stabilime,
Hot Lime,	Steel Grade-Large Rescreened,
Lime Fines,	Steel Grade-Large,
Lime,	Steel Grade-Small Rescreened,
Mini Pebble,	Steel Grade-Small,
Off Spec Production Lime,	Thiosorbic Lime,
PCC Grade-Large Rescreened,	Water Grade-Small,

Recommended Uses: Water treatment, steel flux, caustic agent, pH adjustment, acid gas absorption, construction

Manufacturer: Carmeuse Lime & Stone

US Office	Canadian Office
11 Stanwix Street, 21st Floor	PO Box 190
Pittsburgh, PA 15222	Ingersoll, ON N5C 3K5
Phone: (412) 995-5500	Phone: (519) 423-6283
Fax: (412) 995-5594	Fax: (519) 423-6545

Emergency Contact: Infotrac: (800) 535-5053 (24 hrs a day, 7 days a week)

2. Hazards Identification

GHS classification

Physical Hazards

None

Health Hazards

Skin Irritation	Category 2
Eye Damage	Category 1
Carcinogenicity	Category 1A
Specific Target Organ Toxicity – Single Exposure	Category 3
Specific Target Organ Toxicity – Repeated Exposure	Category 1

GHS Label Elements:

Signal Word: Danger

Hazard Statements:	Causes skin irritation. Causes serious eye damage. May cause respiratory irritation. May cause cancer through inhalation Causes damage to lungs through prolonged or repeated exposure by inhalation. Reacts violently with water, releasing heat which can ignite combustible materials.
Precautionary Statements:	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep container tightly closed Do not breathe dust. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in well-ventilated area Wear protective gloves, clothing and eye protection Do not use water on material spills.
Pictograms:	

3. Composition

Chemical name	% by weight	CAS#
Calcium oxide	> 89	1305-788
Magnesium oxide	< 4	1309-48-4
Silica-crystalline quartz	0.1 - 2	14808-60-7

4. First Aid Measures

Eyes: Immediately flush eyes with generous amounts of water for at least 15 minutes. Pull back the eyelid to ensure that all lime dust has been washed out. Seek medical attention immediately. Do not rub eyes.

Skin: Wash exposed area with large amounts of water. Seek medical attention immediately.

Ingestion: Do not induce vomiting. Seek medical attention immediately. Never give anything by mouth unless instructed to do so by medical personnel.

Inhalation: Move victim to fresh air. Seek medical attention if necessary. If breathing has stopped, give artificial respiration

Most Important Symptoms: Irritation of skin, eyes, gastrointestinal tract or respiratory tract.

Immediate medical attention / special treatment? See first aid information above. Note to Physicians: Provide general supportive measures and treat symptomatically.

5. Fire Fighting Measures

Suitable (and unsuitable) fire extinguishing media:	Use dry chemical fire extinguisher. Do not use water or halogenated compounds, except that large amounts of water may be used to deluge small quantities of this product.
Specific hazards arising from the product	Inhalation, skin or eye contact, can result in serious injury. This product is not combustible or flammable. However, this product reacts violently with water, and can release heat sufficient to ignite combustible materials. This product is not considered to be an explosion hazard, although reaction with water or other incompatible materials may rupture containers. When this product is wet, it can be very slippery and can result in a slip hazard. Hazardous Combustion Products: None.
Special protective equipment and precautions for fire fighters	Wear full fire-fighting turn-out gear (full Bunker gear), and respiratory protection (SCBA) to prevent inhalation, skin or eye contact.

6. Accidental Release Measures

Personal precautions, protective equipment, emergency procedures:

Avoid inhalation, eye and skin contact. Avoid generating airborne dust. Wear appropriate protective clothing as described in section 8.

Methods and materials for containment and clean up:

Utilize cleanup methods that minimize generating dust: vacuum. Avoid dry sweeping. Do not use water on large spills, as this product reacts violently with water and releases heat. Residue on surfaces may be removed with copious amount of water or vinegar.

7. Handling & Storage

Safe Handling:	Avoid inhalation, skin and eye contact. Avoid generating airborne dust. An eye wash station should be readily available when this product is handled.
Safe Storage:	Keep in tightly closed containers. Protect containers from physical damage. Store in a cool, dry, and well-ventilated location. Do not store near incompatible materials (see Section 10 below). Keep away from moisture. Long-term storage in aluminum containers is not recommended, as calcium oxide may corrode aluminum over long periods of time

8. Exposure Controls/Personal Protection

Occupational Exposure Limits

	OSHA PEL (mg/m^3)	ACGIH TLV (mg/m^3)	Ont. Reg. 833 TWAEV (mg/m^3)
Calcium oxide	5	2	2
Magnesium oxide	15	10	10
silica - crystalline quartz	30 / (% silica +2) (total) 10 / (% silica +2) (respirable)	0.025 (respirable)	0.1

Engineering Controls: Use with adequate general or local exhaust ventilation and to maintain exposure below occupational exposure limits.

Individual Protection Measures (Personal Protective Equipment):

Specific Eye / Face Protection: Safety glasses with side shields. In windy conditions, or if work activity generates elevated airborne dust levels, dust proof or chemical goggles are recommended. Contact lenses should not be worn.

Specific Skin Protection: When there is a risk of skin contact, wear appropriate clothing and gloves to prevent contact.

Specific Respiratory Protection: If exposure limits are exceeded, an approved particulate respirator, or supplied air respirator, appropriate for the airborne concentrations, should be used. Selection and use of the respiratory protective equipment must be in accordance with applicable regulations and good industrial hygiene practices.

Other: An emergency eye wash fountain and shower are recommended.

9. Physical & Chemical Properties

Appearance: White or grayish white material

Odor: Odorless

Odor threshold: Not Applicable

pH at 25 degrees C: 12.45

Melting Point: 4658 °F (2570 °C)

Boiling Point and range: 5162 °F (2850 °C)

Flash Point: Not Applicable

Evaporation Rate: Not Applicable

Flammability: Not Applicable

Upper/lower flammability or explosive limits Not Applicable

Vapor pressure/density: Non Volatile

Relative density:	3.2 – 3.4
Solubility:	Neglible in water but reacts with water to produce $Ca(OH)_2$ and heat Soluble in acids, glycerin, and sugar solutions
Partition coefficient: n-octanol/water	Not applicable
Auto-ignition temperature:	Not Available
Decomposition temperature:	Not available
Viscosity:	Not Applicable

10. Stability & Reactivity

Reactivity: Reacts violently with water to form calcium hydroxide, releasing heat. Reacts with acids to form calcium salts, releasing heat. Reacts with carbon dioxide in air to form calcium carbonate. See also Incompatibility below.

Chemical stability: Stable under normal storage and handling conditions.

Possibility of Hazardous Reactions: See "reactivity" above.

Conditions to avoid: Vicinity of incompatible materials.

Incompatibility: This product should not be mixed or stored with the following materials, due to the potential for violent reaction and release of heat:

- water (unless in a controlled process)
- acids
- reactive fluoridated compounds
- reactive brominated compounds
- reactive powdered metals
- reactive phosphorous compounds
- aluminum powder
- organic acid anhydrides
- nitro-organic compounds
- interhalogenated compounds

Hazardous decomposition products: None

11. Toxicological Information

Likely routes of exposure & symptoms:

Eyes: Contact can cause severe irritation or burning of eyes, including permanent damage.

Skin: Contact can cause severe irritation or burning of skin, especially in the presence of moisture.

Ingestion: This product can cause severe irritation or burning of gastrointestinal tract if swallowed.

Inhalation: This product can cause severe irritation of the respiratory system.

Chronic health effects:	This product contains trace amounts of crystalline silica. Prolonged or repeated inhalation of respirable crystalline silica can cause silicosis, as serious lung disease.
Respiratory or skin sensitization:	This material is not known to cause sensitization
Germ cell mutagenicity:	No data available.
Carcinogenicity:	This product is not listed as carcinogenic by OSHA, IARC, NTP, ACGIH, or the EU Directives. This product may contain trace amounts of crystalline silica quartz which is listed by IARC as "Carcinogenic to Humans" (Group 1) and "Known to be a Human Carcinogen" by NTP (National Toxicology Program).
Reproductive toxicity:	No Data Available.
Numerical Measures of Toxicity	Crystalline Silica: Oral (rat) LD_{50} > 22,500 mg/kg Calcium oxide: Oral (rat) LD_{50}: 3059 mg/kg

12. Ecological Information

Because of the elevated pH of this product, it might be expected to produce some ecotoxicity upon exposure to certain aquatic organisms and aquatic systems in high concentrations
This material shows no bioaccumulation effect or food chain concentration toxicity.

13. Disposal Considerations

Dispose of contents in accordance with federal, state, provincial and local regulations.

14. Transport Information

UN Number	UN1910
UN Proper shipping name	Calcium Oxide
Transport Hazard class(es)	When transported by air only: Hazard Class 8-Corrosive
Packing group	When transported by air only: Packing Group III
Environmental hazards	This material is alkaline and if released into water or moist soil will cause an increase in pH

Transport in bulk (according to Annex II of MARPOL 73/79 and the IBC

Code:	
Special precautions which a user needs to be aware of	When being transported by air, quicklime is classified in the Department of Transportation (DOT) regulations as a hazardous material. (49 CFR 172.101). For aircraft transport only, Calcium Oxide is classified as Hazard Class 8-Corrosive, UN1910, Packing Group III. For passenger aircraft, the maximum net quantity allowed per container is 25 kg. For cargo aircraft, the maximum net quantity allowed per container is 100 kg. For quantities greater than 25 kg up to and including 100 kg, the container shall be labeled with CARGO AIRCRAFT ONLY. Because express carriers (i.e., Federal Express, Airborne Express, and United Parcel Service) ship by air, quicklime presented to these carriers for shipment must be packaged, marked, and labeled in accordance with IATA requirements, and must be accompanied by the appropriate shipping documentation. Only personnel trained and certified under applicable DOT Hazardous Materials Regulations (contained in Title 49 of the Code of Federal Regulations) may prepare any quicklime product for air transport. Quicklime is not classified as a hazardous material by DOT when transported by means other than by air.

15. Regulatory Information

CERCLA Hazardous Substances	Not listed
SARA Toxic Chemical (40 CFR 372.65)	Not listed
SARA Section 302 Extremely Hazardous Substances (40 CFR 355)	Not listed
SARA 311/312	Not listed
SARA Section 313 Toxic Chemicals reporting requirements	None
Threshold planning quantity (TPQ)	Not listed
RCRA Hazardous Waste Classification (40 CFR 261)	Not Classified
EPA Toxic Substances Control Act (TSCA) Status	All of the components of this product are listed on the TSCA
California Proposition 65	Airborne crystalline silica particulates of respirable size are known to the State of California to cause cancer.
NFPA ratings	Health: 3 Fire: 0 Reactivity: 2 W
HMIS Ratings	Health: 3 Fire: 0 Reactivity: 2 Personal protection: E
OSHA Specifically regulated substance (29 CFR 1910)	Not listed
OSHA Air contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A)	Listed
MSHA	Not listed
Canada DSL	Listed
Canadian WHMIS Classification	D2A, Materials Causing other toxic effects. E, Corrosive Material

Canada CPR This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation of a Canada and this SDS contains all the required information.

16. Other Information

List of GHS Hazard Statements:	H315: Causes skin irritation H318: Causes serious eye damage H335: May cause respiratory irritation. H350: May cause cancer through inhalation H372: Causes damage to lungs through prolonged or repeated exposure by inhalation.
List of GHS Precautionary Statements:	P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P233: Keep container tightly closed P260: Do not breathe dust. P264: Wash thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P271: Use only outdoors or in well-ventilated area P280: Wear protective gloves, clothing and eye protection

Abbreviations

CERCLA	Comprehensive Environmental Response, Compensation and Liability Act	RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act	IARC	International Agency for Research on Cancer
NTP	National Toxicology Program		

The information contained herein is believed to be accurate and reliable as of the date hereof. However, Carmeuse makes no representation, warranty or guarantee as to results or as to the information's accuracy, reliability or completeness. Carmeuse has no liability for any loss or damage that may result from use of the information. Each user is responsible to review this information, satisfy itself as to the information's suitability and completeness, and circulate the information to its employees, customers and other appropriate third parties.

Safety Data Sheet

1. Product Identifier and Company Identification

Product name : **Hydrochloric (Muriatic) Acid**
HBCC SDS number : CM15000
Synonym : Muriatic Acid, Hydrogen Chloride Solution, Chlorohydric Acid, HCl

Product use and Restrictions : Refer to label or call

Manufacturer Contact Address :

Corporate Headquarters
Hill Brothers Chemical Company
1675 North Main Street
Orange, California 92867
714-998-8800 - Office
800-821-7234 - Office

Corporate Safety & Compliance
Hill Brothers Chemical Company
7121 West Bell Road, Suite 250
Glendale, Arizona 85308
623-535-9955 - Office
623-535-9944 - Fax

Emergency telephone Number (Chemtrec) : 800-424-9300
Website : http://hillbrothers.com

2. Hazard Identification

Classification : Acute Toxicity, Inhalation; Category 3
Skin Corrosion/Irritation; Category 1A
Serious Eye Damage/Eye Irritation; Category 1
Corrosive to metals; Category 1

Signal Word : Danger

Pictogram(s) :

Hazard Statements : H331: Toxic if inhaled.
H314: Causes severe skin burns and eye damage.
H290: May be corrosive to metals

Precautionary Statements

Response : P304+P340+P310: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor.
P301+P310+P330+P331: IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting.

P303+P361+P353+P363+P310: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or doctor.
P305+P351+P338+P310: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER of doctor.

Prevention : P280: Wear protective gloves/protective clothing/eye protection/face protection.
P271: Use only outdoors or in a well-ventilated area.
P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
P264: Wash hands thoroughly after handling.

Storage : P390 Absorb spillage to prevent material-damage.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P405: Store locked up.
P406: Store in a corrosive resistant container with a resistant inner liner.

Disposal : P501: Dispose of contents and container in accordance with all local/regional/national/international regulation.

3. Composition/Information on Ingredients

CAS Number	Ingredient Name	Weight %
7647-01-0	Hydrochloric Acid	5-35%
7732-18-5	Water	95-65%

Synonyms/ Common Names : Muriatic Acid, Hydrogen Chloride Solution, Chlorohydric Acid, HCl

4. First Aid Measures

Ingestion : If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, do not induce vomiting. Victim should rinse mouth with large amounts of water. Victim should drink large amounts of water to dilute the ingested material. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer more water. Never induce vomiting or give water to someone who is unconscious having convulsions, or who cannot swallow. GET IMMEDIATE MEDICAL ATTENTION.

Inhalation : If vapors, mists, or sprays of this product are inhaled, remove victim to fresh air. Give artificial respiration ONLY if breathing has stopped. Do not use mouth-to-mouth method if victim ingested or inhaled the substance: induce artificial respiration with the aid of a pocket mask equipped with a

one-way valve or other proper respiratory medical device. Give Cardiopulmonary Resuscitation (CPR) if there is no pulse AND no breathing. Obtain medical attention IMMEDIATELY. Symptoms may appear up to 48 hours after exposure.

Skin : Immediately flush contaminated skin with water for at least 15 minutes and wash with soap and water. If large areas of the body are contaminated or if clothing is penetrated, immediately use safety shower preferably removing clothing while under the shower. Flush exposed areas with large amounts of water for at least 30 minutes. Keep affected area cool. GET PROMPT MEDICAL ATTENTION. Wash clothing before reuse. Destroy contaminated shoes.

Eyes : Immediately flush eyes with a directed stream of water for at least 15 minutes. Forcibly hold eyelids apart to ensure complete irrigation of all eye and lid tissue. Do not use chemical antidotes. Speed is essential. GET IMMEDIATE MEDICAL ATTENTION.

Medical Conditions : Hydrogen chloride (Hydrochloric Acid) is a respiratory irritant. Persons with impaired pulmonary function may be at increased risk from exposure. Periodic surveillance is indicated.

Effects of Overexposure : The most significant routes of occupational overexposure are inhalation and contact with skin and eyes.

Summary of Acute Health Hazards

Ingestion : If ingested, solutions can cause corrosive burns to the mouth, throat, esophagus and stomach. Symptoms may include difficulty in swallowing, intense thirst, nausea, vomiting, diarrhea and in severe cases, collapse and death. Small amounts of acid which enter the lungs during ingestion or aspiration while vomiting can cause serious lung injury and death.

Inhalation : Vapor or mist from concentrated solutions can cause severe nasal irritation, sore throat, choking, coughing and difficulty breathing (50-100 ppm). Prolonged exposures can cause burns and ulcers to the nose and throat. Severe exposures (e.g. 1000-2000 ppm), for even a few minutes, can cause a life-threatening accumulation of fluid in the lungs (pulmonary edema). Symptoms of pulmonary edema such as shortness of breath can be delayed for several hours after the exposure.

Skin : Contact with the skin may cause severe irritation, skin burns and permanent skin damage. Prolonged exposure may result in ulcerating burns which could leave scars. Prolonged and repeated exposure to dilute solutions often causes irritation, redness, pain and drying and cracking of the skin.

Eyes : Contact with the eyes may cause severe irritation, eye burns and permanent eye damage, which may result in permanent blindness. Low concentrations of vapors or mist (10-35 ppm) can be immediately irritating, causing redness.

Note to Physicians : This product may cause severe pneumonitis if aspirated. If ingestion has occurred less than 2 hours earlier, carry out careful gastric lavage; use

endotracheal cuff if available, to prevent aspiration. Observe patient for respiratory difficulty from aspiration pneumonitis. Give artificial resuscitation and appropriate chemotherapy if respiration is depressed. Following exposure the patient should be kept under medical review for at least 48 hours as delayed pneumonitis may occur. DO NOT attempt to neutralize the acid with weak bases since the reaction will produce heat that may extend the corrosive injury.

Summary of Chronic Health : Prolonged and repeated exposure to dilute solutions often causes irritation, redness, pain and drying and cracking of the skin. Repeated exposure to low concentrations of mist can cause brownish discoloration and damage to tooth enamel. Dental erosion becomes more severe with increased exposure. Repeated exposure to low concentrations can cause nose and gum bleeding. Chronic bronchitis and stomach pain (gastritis) have also been reported.

5. Fire Fighting Measures

Extinguishing : Use water spray, fog, alcohol-resistant foam, dry chemicals, CO2, or other agents as appropriate for surrounding fire. Neutralize with soda ash or slaked lime. Do NOT use straight streams of water. Most foams will react with the material and release corrosive/toxic gases. Do not use carbon dioxide if cyanides are involved in a fire. Water fog is effective for controlling vapors. Controlled water addition is an effective method to reduce vapor pressure and control vapor emissions. If possible, prevent run-off water from entering storm drains, bodies of water, or other Environmentally sensitive areas.

Special Exposure Hazards : This product is corrosive, and presents a significant inhalation and contact hazard to fire-fighters. This product will not decompose at temperatures below 1500°C (2730°F). Thermal oxidative decomposition produces toxic chlorine fumes and explosive hydrogen gas. Reacts with active metals (potassium, sodium, calcium, powdered aluminum, zinc, magnesium) to produce flammable hydrogen gas which can form explosive mixtures. May also form hydrogen chloride, and acid vapors. Explosive concentrations of hydrogen may accumulate inside metal equipment.

Special Protective Equipment for Firefighters : Use self-contained breathing apparatus and full protective equipment.

Fire Fighting Procedures : N/A

NFPA Rating : Health - 3
Flammability - 0
Instability - 1

0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

Uniform Fire Code Rating : Class 3 Water-Reactive Material

6. Accidental Release Measures

Personal Precautions : In case of a spill, clear the affected area, protect people and respond with trained personnel.

Emergency Procedures : Spill and Leak Response: uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used.

Methods of Containment And Clean-Up : Deny access to the area. Determine isolation distance. Stop leak at source, dike area, pick up with pump as much material as possible, prevent material from entering waterway, prevent contact with other chemicals. Absorb spilled liquid with polypads or other suitable absorbent materials. Neutralize residue with lime or soda ash or other acid-neutralizing agent. Decontaminate the area thoroughly. Test area with litmus paper to confirm neutralization. Place all spill residues in a suitable container. Dispose of in accordance with Federal, State and local hazardous waste disposal regulations (see Section XIII)

7. Handling and Storage

Safe Handling : All employees who handle this material should be trained to handle it safely. Avoid breathing mists or sprays generated by this product. Use in a well -ventilated location.

Storage : For Non-Bulk Containers - Open containers slowly, on a stable surface. Containers of this product must be properly labeled. Only store in acid -resistant containers. Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers, or in a diked area, as appropriate. Store containers away from incompatible chemicals. Keep container tightly closed when not in use. Wash thoroughly after using this material. Storage areas should be made of fire-resistant materials. If appropriate, post warning signs in storage and use areas. Inspect all incoming containers before storage containers are properly labeled and not damaged. Empty containers may contain residual liquid. Therefore, empty containers should be handled with care.
Bulk Containers – All tanks and pipelines which contain this material must be labeled. All equipment must be designed for use with this product. Perform routine maintenance on tanks or pipelines which contain this

product. Report all leaks immediately to the proper personnel.

Tank Car Shipments – Tank cars carrying this product should be loaded and unloaded in strict accordance with tank-car manufacturer's recommendation and all established on-site safety procedures. Appropriate personal protective must be used (see Section VIII). All loading and unloading equipment must be inspected prior to each use. Loading and unloading operations must be attended, at all times. Tank cars must be level, brakes must be set or wheels must be locked or blocked prior to loading and unloading. Tank car (for loading) or storage tank (for unloading) must be verified to be correct for receiving this product and properly prepared, prior to starting the transfer operations. All equipment must be designed for use with this product. Hoses must be verified to be clean and free of incompatible chemicals, prior to connection to the tank car or vessel. Valves and hoses must be verified to be in the correct positions, before starting transfer operations. A sample (if required) must be taken and verified (if required) prior to starting transfer operations. All lines must be blown-down and purged before disconnecting them from the tank car or vessel.

Work/Hygienic : All employees who handle this product should wash their hands before eating, drinking, smoking, or using toilet facilities. Do NOT place food, coffee or other drinks in the area where dusting or splashing of solutions is possible.

Practices

Ventilation : Always use this product in areas where adequate ventilation is provided. Provide good general room ventilation to minimize exposure. Use local exhaust and corrosion-resistant ventilation at points of vapor emission. System should be discharged into absorption media.

Maintenance : Protective Practices During Maintenance of Contaminated Equipment – Follow practices indicated in Section VI. Make certain application equipment is locked and tagged-out safely. Decontaminate equipment before maintenance begins by a triple-rinse with water followed, if necessary, by using acid neutralizing agent and an additional rinse. Collect all rinsates and dispose of according to applicable Federal, State, or local regulations.

8. Exposure Controls/Personal Protection

Occupational Exposure :

Chemical Name: Hydrochloric Acid				
Exposure Limits (TWAs) in Air				
CAS Number	IDLH	ACGIH TLV	OSHA PEL	STEL
7647-01-0		2 ppm	5 ppm	N/A

Protective Equipment : In the event of a large release, don proper protective equipment, use impermeable gloves, specific for the material handled, chemically resistant suit and boots, and hard hat. Self-Contained Breathing Apparatus or respirator may be required where engineering controls are not adequate or conditions for potential exposure exist. When respirators are required, Select NIOSH/MSHA approved based on actual or potential airborne

concentrations in accordance with latest OSHA and/or ANSI recommendations. The proper personal protective equipment for incidental releases (e.g.-1 L of the product released in a well-ventilated area) use impermeable gloves, specific for the material handled, goggles, face shield, respirator and appropriate body protection.
Protective Clothing: Wear protective gloves such as rubber or neoprene to minimize skin contact. Use of rubberized coveralls and rubber shoes are suggested. Wash thoroughly after use. In case of emergency, or where there is a possibility of considerable exposure, wear complete acid suit with hood and forced air or self-contained breathing apparatus.

Eye Protection : Wear safety glasses with side shields or chemical goggles. Person subject to hydrochloric acid exposure should not wear contact lenses. Face shields are recommended when the operation can generate splashes, sprays or mists.

Respiratory Protection : Use approved organic vapor acid-gas respirator for areas where airborne exposure is excessive. For a higher level of protection use positive pressure supplied air respiration protection or self-contained breathing apparatus or if oxygen levels are below 19.5% or are unknown.

9. Physical and Chemical Properties

	5%	15%	31%	35%
Boiling Point °F (°C)	215 (102)	225 (107)	183 (84)	150 (66)
Freezing Point °F (°C)	-20 (-29)	-70 (-57)	-49 (-45)	-26 (-32)
Vapor Pressure mmHg@20°C	17	14	25	76
Sp. Gravity 60°F /15.2°C	1.0357	1.1154	1.1581	1.1779

Chemical Formula: HCL
Odor: Pungent, suffocating odor
Appearance: Colorless to yellowish clear liquid
Flash Point: None
Flammability: N/A
pH: < 1.0
Solubility in Water: Complete
Viscosity: N/A
% Volatiles: 100
Molecular Weight: 36.46

How to detect this compound: Litmus paper will turn red upon contact with even low concentrations of this solution.

10. Stability and Reactivity

Reactivity : Contact with metals cause generation of flammable concentrations of hydrogen gas.

Chemical Stability : Stable

Possibility of Hazardous Reactions or Polymerizations	:	Hazardous polymerization will not occur
Conditions to Avoid	:	Heat or fire, runoff to sewer, inhalation of gas, sparks where hydrogen may be present.
Incompatible Materials	:	Contact with metals and strong oxidizers. Reacts exothermically with alkalis, metal oxides, amines, active metals carbonates, and sulfides. Reacts with oxidizers to give chlorine gas. Reacts with cyanides to give hydrogen cyanide gas. Reacts with sulfides to give hydrogen sulfide gas. Reacts with formaldehyde to give bischloromethyl ether (an OSHA regulated carcinogen) Reacts with amines to form ammonia. Reacts with carbonates to form carbon dioxide. Other materials to avoid are: Bases, acetic anhydride, alkali metals, aluminum, copper, copper alloys, fluorine, iron, sodium hydroxide, steel, sulfites, sulfuric acid, vinyl acetate, zinc, potassium permanganate, cesium acetylene carbide, rubidium acetylene carbide, rubidium carbide, sodium, chlorosulfonic acid, oleum carbonates, perchloric acid, calcium phosphide, metal oxides, acetates, cesium carbide, beta-propiolactone, ethyleneimine, propylene oxide, lithium silicides, alcohols + hydrogen cyanide, 2-aminoethanol, ammonium hydroxide, calcium carbide, 1,1 -difluoroethylene, ethylene diamine, magnesium boride, mercuric sulfate, silver perchlorate + carbon tetrachloride, formaldehyde, uranium phosphide.
Hazardous Decomposition Products	:	Chlorine will be released by mixing with strong oxidizers. Hydrogen chloride, carbon monoxide, carbon dioxide. When heated to decomposition, emits toxic hydrogen chloride fumes and will react with water or steam to produce heat and toxic and corrosive fumes. Thermal oxidative decomposition produces toxic chlorine fumes and explosive hydrogen gas.

11. Toxicological Information

Acute and Chronic Effects	:	See Section 4
Routes of Exposure	:	This product may affect the body either through ingestion, inhalation, or contact with the eyes and/or skin.
Inhalation	:	Yes
Ingestion	:	Yes
Skin	:	Yes
Eyes	:	Yes
Symptoms related to Physical, Chemical & Toxicological Characteristics	:	This solution is corrosive, and can burn and damage eyes, skin, mucous membranes, and any other exposed tissue. If inhaled, irritation of the respiratory system may occur, with coughing, and breathing difficulty. Though unlikely to occur during occupational use, ingestion of large quantities may be fatal.
Numerical Measures of Toxicity	:	LD50 (rabbit): 900 mg/kg. @ 100% HCl. LD50 (rat): 3124 ppm/1 hour @ 100% HCl. LC50 (inhalation, mouse) = 1108 ppm/1 hr.
Chronic Toxicity	:	N/A

Carcinogenicity :

Product Name: Hydrochloric Acid					
ACGIH	IARC	EPA	NIOSH	NTP	OSHA
	IARC Monograph: Hydrogen Chloride - Group 3 Carcinogen *Hydrogen Chloride*			*No*	*No*

TARGET ORGANS : N/A

12. Ecological Information

Ecotoxicity : LC50 mosquito fish = 282 mg/l 96 hours
LC50 fathead minnow = 21900 ug/l 96 hours
LC50 trout = 10 mg/l 24 hours
LC50 shrimp = 100 to 330 mg/l 48 hours (salt water)
LC50 gold fish = 178 mg/l 48 hours (salt water)

Persistence and Degradability : Rapidly hydrolyzes when exposed to water.

Bioaccumulative Potential :

Product/Ingredient	Log_{Pow}	BCF	Potential
N/A	N/A	N/A	N/A

Mobility in Soil : Will exhibit extensive evaporation from soil surfaces. Upon transport through the soil, hydrochloric acid will dissolve some of the soil materials (especially those with carbonate bases) and the acid will neutralize to some degree.

13. Disposal Considerations

Disposal of Container : Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

UN# : UN1789
Proper Shipping Name : Hydrochloric Acid

Hazard Class/Division	: 8
Packing Group	: PG II
Marine Pollutant	: N/A
Special Precautions	: N/A
Emergency Response Guidebook	: N/A
Placard Advisory	: 2012 ERG, Guide 157, pages 252-253

15. Regulatory Information

Section 302 Extremely Hazardous Substance (EHS)	: TPQ: 500 Lbs.
Section 304 Extremely Hazardous Substance (EHS)	: RQ: 5,000 Lbs.
CERCLA Hazardous Substance	: 5000 Pounds (2270 Kilograms) (527.42 Gals)
Section 313 Supplier Notification	
Clean Air Act (CAA)	: TQ: 5,000 Lbs.
California Prop 65	: N/A
Label Warning	: N/A
EPA Registration	: N/A

16. Other Information

Revision date	: 02/25/2015
Supersedes	: 05/21/2009
First Issue	: 12/01/1986
Chemical Family/Type	: Inorganic Acid
Section(s) changed since last revision	: MSDS to First Issue SDS Conversion

IMPORTANT! Read this SDS before use or disposal of this product. Pass along the information to employees and any other persons who could be exposed to the product to be sure that they are aware of the information before use or other exposure. This SDS has been prepared in accordance with the Globally Harmonized System of Chemical and Labeling of Chemicals (GHS) Fifth Edition and the OSHA Hazard Communication Standard [29 CFR 1910.1200]. The SDS information is based on sources believed to be reliable. Available data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse are beyond our control; **Hill Brothers Chemical Company** makes no warranty, either expressed or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. Additional information may be necessary or helpful for specific conditions and circumstances of use. It is the user's responsibility to determine the suitability of this product and to evaluate risks and exercise appropriate precautions for protection of employees and others prior to use.

Holcim

SAFETY DATA SHEET

MATERIAL: MASONRY MORTAR AND STUCCO CEMENTS

Section 1 – Product Identification

Product Identifier

Product Name: Masonry Mortar and Stucco Cements

Product Codes: Holcim Mortamix Masonry Cement, Holcim Mortar Cement, Holcim Cement-Lime, Holcim Mortamix Rainbow Custom Color Masonry Cement, Holcim Rainbow Custom Color Cement-Lime, Holcim Custom Stucco. (This SDS covers many products. Individual constituents will vary.)

Synonyms: Masonry Cement Type O, N, S and M. Cement-Lime Type O, N, S and M. Mortar Cement Type S, Stucco Cement.

Product Form: Solid / powder

Intended Use of Product: Masonry mortar and stucco cements are cementitious binders used for masonry, exterior and interior stucco, and other building and construction applications.

Name, Address and Telephone of Responsible Party

Holcim (US) Inc.
24 Crosby Drive
Bedford, MA 01730
(888) 646-5246

Emergency Contact Information:

CHEMTREC: 1-800-424-9300

Section 2 – Hazards Identification

Classification of the Substance or Mixture

Classification (GHS-US)

Skin Corrosion 1B
Eye Damage 1
Skin Sensitizer 1B
Specific Target Organ Toxicity Single Exposure 3

Label Elements

Hazard Pictograms

Signal Word Danger

Hazard Statements

Causes severe skin burns and eye damage
May cause an allergic skin reaction
May cause respiratory irritation

Precautionary Statements

Prevention

Do not breathe dust.
Wear protective gloves/protective clothing/eye protection/face protection
Wash thoroughly after handling.
Do not handle until all safety precautions have been read and understood.

Response

If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a doctor.

If on skin: Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse.

If swallowed: Rinse mouth. Do NOT induce vomiting. Immediately call a poison center/doctor.

Storage Store locked up.

Disposal Dispose of contents/container in accordance with local/state/national regulations.

Other Hazards Exposure may aggravate those with pre-existing eye, skin or respiratory conditions or illness.

Section 3 – Composition/Information on Ingredients

Component/Ingredient	CAS #	Percent Present (Range)
Portland cement	65997-15-1	0 - 100
Limestone (calcium carbonate)	1317-65-3	0 - 60
Hydrated lime (calcium magnesium hydroxide)	39445-23-3	0 - 55
Magnesium oxide	1309-48-4	0 - 10
Calcium oxide	1305-78-8	30 - 70
Gypsum (calcium sulfate)	13397-24-5	2 - 7
Red pigment (hematite)	1317-60-8	0 - 10
Red pigment (iron oxide)	1309-37-1	0 - 10
Yellow pigment	51274-00-1	0 - 10
Black pigment	12227-89-3	0 - 10
Ochre	1343-81-3	0 - 10
Crystalline Silica (Quartz)	14808-60-7	0 - < 1

Other Components

Masonry mortar and stucco cement is made from materials mined from the earth and processed using energy provided by fuels. Additional materials, such as fly ash, kiln dust and slag may also be introduced into the cement manufacturing process. A chemical analysis of this product may reveal trace amounts of naturally occurring but potentially harmful chemical compounds such as free crystalline silica, organic compounds, potassium and sodium compounds, heavy metals including cadmium, chromium (including hexavalent chromium), nickel and lead. Other trace constituents may include calcium oxide (also known as free lime or quick lime) and organic compounds from grinding aids such as amine acetate salts, glycols and 1,2-ethanediol.

Section 4 – First Aid Measures

Description of First Aid Measures

Eyes Rinse eyes and under lids cautiously with clean water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

Skin Remove contaminated clothing. Remove dry material from skin, but avoid creating dust. Wash with plenty of water. If skin irritation occurs, get immediate medical advice/attention.

Inhalation Remove person to fresh air away from dust and keep comfortable for breathing. If coughing persists, obtain medical attention.

Ingestion Do not induce vomiting. If subject is conscious, rinse the mouth with water to remove any material and drink plenty of water to dilute any swallowed material. Do not give drink or attempt to force water to an unconscious person. Get medical advice/attention.

Important Symptoms and Effects (Acute and Delayed)

Eyes Causes serious eye irritation and may scratch eye surface due to particle abrasion. May cause chemical burns resulting in corneal damage.

Skin Causes skin irritation if exposed to moisture on skin creating redness, dryness and itching. Extended exposure to wet material will result in chemical burns to skin, possibly severe.

Inhalation May irritate nose and throat if dust is inhaled. Prolonged or repeated inhalation of respirable dust may lead to respiratory tract or lung damage.

Ingestion May cause irritation and burns of mouth, throat, stomach and digestive tract if swallowed.

Recommendations for Immediate Medical Care or Special Treatment

Seek immediate medical attention for inhalation of large quantities of dust or exposure of wet material over large areas of skin.
Seek immediate medical attention if material comes into contact with eyes and cannot be immediately removed.

Section 5 – Fire Fighting Measures

General Fire Hazards None. Material is not considered flammable or combustible.

Extinguishing Media Use water or water spray to extinguish any fires involving this material.

Extinguishing Media to Avoid None.

Hazards of Combustion None.

Fire Fighting Recommendations Firefighters should always wear full protective gear to fight any fire.

Refer to Section 9 for flammability information.

Section 6 – Accidental Release Measures

Precautions Avoid creating dust. Prevent material from entering sewers, drains, ditches or waterways.

Personal Protection Wear respiratory protection and protective eyewear/clothing to avoid eye or skin contact.

Emergency Procedures Ventilate area and avoid creating dust. Remove unnecessary persons from area.

Containment Procedures Barricade solid material to prevent additional spillage.

Clean Up Procedures Scoop or vacuum up spilled material while avoiding dust creation. Scoop up wet material and place in approved container. Allow wet material to harden before disposal.

Section 7 – Handling and Storage

Safe Handling Practices Avoid contact with skin or eyes. Avoid breathing dust. Use only in well ventilated areas. Wear appropriate personal protective equipment to prevent eye or skin contact and use respiratory protection equipment if dusty or in poorly ventilated areas.

Safe Storage Measures Store in well-ventilated areas away from moisture and incompatible materials. If stored in containers, keep containers closed when not in use.

Incompatible Materials Water/moisture exposure will cause material to generate heat. Keep away from fluoride compounds, strong acids and oxidizers. Cement dissolves in hydrofluoric acid, producing corrosive silicon tetrafluoride gas.

Section 8 – Exposure Controls & Personal Protection

Exposure Limits for Individual Components **(T= Total Respirable [PNOC/PNOR], R=Respirable fraction, I=Inhalable-aerosol)**

Component	OSHA PEL	ACGIH TLV	NIOSH REL
Portland cement	15 mg/m3 (T); 5 mg/m3 (R)	1 mg/m3 (R)	10 mg/m3 (T); 5 mg/m3 (R)
Hydrated lime	15 mg/m3 (T); 5 mg/m3 (R)	5 mg/m3	5 mg/m3
Magnesium oxide	15 mg/m3	10 mg/m3 (I)	Not established
Calcium oxide	5 mg/m3	2 mg/m3	2 mg/m3
Gypsum (Calcium Sulfate)	15 mg/m3 (T); 5 mg/m3 (R)	10 mg/m3 (T)	10 mg/m3 (T); 5 mg/m3 (R)
Limestone (Calcium Carbonate)	15 mg/m3 (T); 5 mg/m3 (R)	10 mg/m3	10 mg/m3 (T); 5 mg/m3 (R)
Red pigment (hematite)	10 mg/m3	5 mg/m3	5 mg/m3
Red pigment (iron oxide)	10 mg/m3	5 mg/m3	5 mg/m3
Yellow pigment	10 mg/m3	5 mg/m3	5 mg/m3
Black pigment	10 mg/m3	5 mg/m3	5 mg/m3
Ochre	10 mg/m3	5 mg/m3	Not established
Crystalline Silica (Quartz)	10 mg/m3 (R) /(% SiO2 + 2) 30 mg/m3 (T) /(% SiO2 + 2)	0.025 mg/m3 (R)	0.05 mg/m3 (R)

Exposure Controls

Engineering Controls Use outdoors in well-ventilated areas; otherwise employ natural or mechanical ventilation to maintain exposure within applicable limits.

Personal Protection Avoid contact with skin or eyes. Avoid creating or breathing dust.

Face and Eyes Safety glasses with side shields or protective goggles should be worn while using this product. For extremely dusty conditions, non-vented goggles or goggles with indirect venting are recommended. Avoid contact lens wear when using this product.

Body Long sleeved shirts and trousers should be worn while using this material. Wear water-proof boots. If working in dusty conditions, impervious over garments are recommended.

Respiratory If exposure levels cannot be maintained below acceptable limits, suitable particulate-filtering facemasks or respirators approved by MSHA/NIOSH should be worn in accordance with the user's respiratory protection program and OSHA/MSHA guidelines.

Hands Protective gloves with wrist/arm cuffs should be worn to avoid direct contact with skin.

Section 9 – Physical and Chemical Properties

Physical State	Solid, powder	**Specific Gravity**	2.8 – 3.0
Appearance & Color	Grey, buff or colored powder	**Flash Point/Method**	None. Not flammable.
Odor	None	**Auto Ignition Temperature**	Not determined
pH	>12 (in water)	**Lower Flammability Limit**	Not applicable
Boiling Point	Not applicable	**Upper Flammability Limit**	Not applicable
Solubility (Water)	Negligible (<1%)	**Octanol/H2O Coefficient**	Not determined
Evaporation Rate	Not applicable	**Viscosity**	Not applicable
Melting Point	Not determined	**Freezing Point**	Solid at room temperature
Vapor Density	Not applicable	**Explosion Risk: Static**	Not considered a hazard
Vapor Pressure	Not applicable	**Explosion Risk: Shock**	Not considered a hazard

Section 10 – Stability and Reactivity

Reactivity	Reacts with water to create heat and calcium hydroxide.
Chemical Stability	Stable at standard temperature and pressures.
Hazardous Reactions	None. Hazardous polymerization will not occur.
Conditions to Avoid	Moisture or wetting will cause exothermic heating as product cures.
Incompatible Materials	Avoid contact with strong acids, oxidizers and ammonium salts.
Decomposition Hazards	Reacts with water to form calcium hydroxide which can irritate/damage skin. Cement dissolves in hydrofluoric acid, producing corrosive silicon tetrafluoride gas.

Section 11 – Toxicological Information

Product: Blended hydraulic cement

Acute Toxicity	Not classified.
LD50/LC50 Data	Not classified.
Skin Corrosion/Irritation	Causes irritation or chemical burns if exposed to moisture on skin.
Critical Eye Damage/Irritation	Causes serious eye injury due to chemical burns or mechanical irritation.
Respiratory or Skin Sensitization	Not reported/no data available.
Germ Cell Mutagenicity	Not reported/no data available.
Teratogenicity	Not reported/no data available.
Carcinogenicity	Material contains trace amounts of crystalline silica, which may cause lung cancer through repeated or prolonged exposure to dust.
Specific Organ Toxicity (Single Exposure)	May cause respiratory irritation.
Specific Organ Toxicity (Repeated Exposure)	May cause damage/disease to lungs through repeated or prolonged exposure.
Reproductive Toxicity	Not reported/no data available.
Aspiration Respiratory Hazard	Not reported/no data available.
Symptoms: Inhalation	Coughing, sneezing, mucous discharge and dyspnea. Extended contact may lead to chemical burns.
Symptoms: Skin Contact	Redness and itching. Extended contact may lead to chemical burns.
Symptoms: Eye Contact	Redness and itching. Extended contact may lead to corneal abrasion/ulceration.
Symptoms: Ingestion	Irritation and chemical burns of mouth and throat.
Other Toxicological Information	No additional data available.

Components	**Toxicity**	**Carc: IARC**	**Carc: NTP**	**Carc: OSHA**
Portland cement (also see Section 16)	No data	Not listed	Not listed	Not listed
Hydrated lime	Oral LD50 Rat 7340 mg/kg	Not listed	Not listed	Not listed
Magnesium oxide	Oral LD50 Rat 810 mg/kg	Not listed	Not listed	Not listed
Calcium oxide	Oral LD50 Rat 500 mg/kg	Not listed	Not listed	Not listed
Gypsum (Calcium Sulfate)	Oral LD50 Rat >2000 mg/kg	Not listed	Not listed	Not listed
Limestone (Calcium carbonate)	Oral LD50 Rat 6450 mg/kg	Not listed	Not listed	Not listed
Red pigment (hematite)	Oral LD50 Rat >10000 mg/kg	Group 3	Not listed	Not listed
Red pigment (iron oxide)	Oral LD50 Rat >10000 mg/kg	Group 3	Not listed	Not listed
Yellow pigment	Oral LD50 Rat >10000 mg/kg	Not listed	Not listed	Not listed
Black pigment	Oral LD50 Rat >10000 mg/kg	Not listed	Not listed	Not listed
Ochre	Oral LD50 Rat >10000 mg/kg	Not listed	Not listed	Not listed
Crystalline Silica (Quartz) (also see Section 16)	Oral LD50 Rat >22,500 mg/kg LC50 Carp >10,000 mg/L (72 hr)	Group 1	Known	Not listed

Section 12 – Ecological Information

General Ecotoxicity	Not classified.
Persistence and Degradability	Not reported/no data available.
Bioaccumulation Potential	Not reported/no data available.
Mobility in Soil to Groundwater	Not reported/no data available.
Environmental Fate	Not reported/no data available.
Other Environmental Precautions or Information	Avoid release to the environment. Prevent material from entering sewers, drains, ditches or waterways.

Section 13 – Disposal Considerations

Disposal Methods	Dispose as an inert, non-metallic mineral in accordance with applicable federal, state, and local regulations.
Special Considerations	Avoid creating or breathing dust during disposal. Avoid contact with skin and eyes.
Other Disposal Information	Prevent material from entering sewers, drains, ditches or waterways.

Section 14 – Transport Information

Proper Shipping Name	N/A – not regulated.
Hazard Class	N/A – not regulated.
UN Shipping ID Number	N/A – not regulated.
Packing Group	N/A – not regulated.
Environmental/IMDG Codes	N/A – not regulated.

Section 15 – Regulatory Information

Federal

This product contains one or more chemical components or ingredients that may require identification and/or reporting under SARA Section 302, SARA Section 311/312/313, CERCLA and/or TSCA. An examination of the components of this product should be conducted by a qualified environmental professional to determine if such identification or reporting is required by federal law.

- Components: Portland cement, Silica (Crystalline), Iron oxide

State

This product contains one or more chemical components or ingredients that are included or listed on the hazardous substances lists for one or more of the following states: California, Maine, Minnesota, New Jersey, Pennsylvania and Rhode Island. An examination of the components of this product should be conducted by a qualified environmental or safety and health professional to determine the specific requirements for those states.

- Components: Portland cement, Limestone (calcium carbonate), Gypsum (calcium sulfate), Silica (Crystalline), Iron oxide

The state of California requires the following statement (Proposition 65) in regards to this material:

- WARNING! This product contains chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

Section 16 – Other Information

Date of last revision: May 4, 2015 **Prepared and reviewed by:** Holcim (US) Inc. Occupational Safety & Health

Additional information regarding products containing portland cement:
Wet portland cement can cause caustic burns to unprotected skin, sometimes referred to as cement burns. Cement burns may result in blisters, dead or hardened skin, or black or green skin. In severe cases, these burns may extend to the bone and cause disfiguring scars or disability.

Employees cannot rely on pain or discomfort to alert them to cement burns because cement burns may not cause immediate pain or discomfort. By the time an employee becomes aware of a cement burn, much damage has already been done. Accordingly, the safest method to use portland cement is to avoid contact with exposed skin completely. Cement burns can get worse even after skin contact with cement has ended. Any employee experiencing a cement burn is advised to see a health care professional immediately.

Skin contact with wet portland cement can also cause inflammation of the skin, referred to as dermatitis. Signs and symptoms of dermatitis can include itching, redness, swelling, blisters, scaling, and other changes in the normal condition of the skin. Contact with wet portland cement can cause a non-allergic form of dermatitis (called irritant contact dermatitis) which is related to the caustic, abrasive, and drying properties of portland cement.

In addition, hexavalent chromium [Cr(VI)] which may be found in portland cement in trace amounts, can cause an allergic form of dermatitis (allergic contact dermatitis, or ACD) in sensitized employees who work with wet portland cement. When an employee is sensitized, that person's immune system overreacts to small amounts of Cr(VI), which can lead to severe inflammatory reactions upon subsequent exposures. Sensitization may result from a single Cr(VI) exposure, from repeated exposures over the course of months or years, or it may not occur at all. After an employee becomes sensitized, brief skin contact with very small amounts of Cr(VI) can trigger ACD. ACD is long-lasting and employees can remain sensitized to Cr(VI) years after their exposure to portland cement has ended. Medical tests (e.g. skin patch tests) are available that can confirm whether an employee has become dermally sensitized to Cr(VI).

Employees who work with wet portland cement and experience skin problems, including seemingly minor ones, are advised to see a health care professional for evaluation and treatment. In cement-related dermatitis, early diagnosis and treatment can help prevent chronic skin problems.

Additional information regarding crystalline silica:
The major concern is silicosis, caused by the inhalation and retention of respirable (extremely small) crystalline silica dust particles. Silicosis can exist in several forms. Chronic or ordinary silicosis (often referred to as simple silicosis) is the most common form of silicosis, and can occur after many years of exposure to relatively low concentrations of airborne respirable crystalline silica dust. Complicated silicosis or progressive massive fibrosis (PMF) may be associated with decreased lung function and may be disabling. Advanced complicated silicosis or PMF may lead to death. Advanced complicated silicosis or PMF can result in heart disease secondary to the lung disease. Acute silicosis can occur with exposures to very high concentrations of respirable crystalline silica over a very short time period, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath, fever, cough and weight loss. Acute silicosis can be fatal.

IARC: The overall IARC evaluation was that "crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1)." The IARC evaluation noted that "carcinogenicity was not detected in all industrial circumstances studies. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs."

NTP: The National Toxicology Program (NTP), in its Thirteenth Annual Report on Carcinogens, classified "silica, crystalline (respirable)" as a known human carcinogen.

OSHA: Crystalline silica (quartz) is not regulated as a human carcinogen by the Occupational Safety and Health Administration.

Other important information:
While the information provided in this document is believed to provide a useful summary of the hazards of masonry mortar and stucco cement, the information in this document 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.

The data furnished in this document do not address hazards that may be posed by other materials when mixed with masonry mortar and stucco cement. Users should review other relevant safety data sheets before working with this product.

The information presented in the Safety Data Sheet is based on current knowledge and publications and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not be interpreted as guaranteeing any specific property of the product.

SELLER MAKES NO WARRANTY, EXPRESSED OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY HOLCIM (US) INC., EXCEPT THAT THE PRODUCT SHALL CONFORM TO CONTRACTED SPECIFICATIONS.

--END OF SAFETY DATA SHEET--

Safety Data Sheet

Sand

CAROLINA®
www.carolina.com

Section 1 Product Description

Product Name:	Sand
Recommended Use:	Science education applications
Synonyms:	Silicon dioxide, yellow sand, white sand
Distributor:	Carolina Biological Supply Company 2700 York Road, Burlington, NC 27215 1-800-227-1150
Chemical Information:	800-227-1150 (8am-5pm (ET) M-F)
Chemtrec:	800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

DANGER

May cause cancer.

GHS Classification:
Carcinogenicity Category 1A

Other Safety Precautions:	IF exposed or concerned: Get medical advice/attention.
Acute Toxicity Oral Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Dermal Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Inhalation Gas Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Inhalation Vapor Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Inhalation Dust/Mist Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%
Sand	14808-60-7	100

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation:	In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes:	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Ingestion:	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Section 5 Firefighting Procedures

Extinguishing Media:	Use media suitable to extinguish surrounding fire.
Fire Fighting Methods and Protection:	Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards:	None Known
Hazardous Combustion Products:	Carbon dioxide, Carbon monoxide

Section 6 Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled: No health affects expected from the clean-up of this material if contact can be avoided.
Follow personal protective equipment recommendations found in Section 8 of this (M)SDS
Avoid the generation of dusts during clean-up.
No special spill clean-up considerations. Collect and discard in regular trash.

Section 7 Handling and Storage

Handling: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Keep container tightly closed in a cool, well-ventilated place.
Storage: Store locked up. Keep container tightly closed in a cool, well-ventilated place.
Storage Code: Green - general chemical storage

Section 8 Protection Information

	ACGIH		OSHA PEL	
Chemical Name	**(TWA)**	**(STEL)**	**(TWA)**	**(STEL)**
Sand	0.025 mg/m3 TWA (respirable fraction)	N/A	N/A	N/A

Control Parameters

Engineering Measures: Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.

Personal Protective Equipment (PPE): Lab coat, apron, eye wash, safety shower.

Respiratory Protection: No respiratory protection required under normal conditions of use. Wear a NIOSH approved respirator if levels above the exposure limits are possible.

Eye Protection: Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection: Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves: Nitrile, Natural rubber, Neoprene, PVC or equivalent.

Section 9 Physical Data

Formula: SiO2
Molecular Weight: 60.09
Appearance: Colorless to White Crystalline Solid
Odor: None
Odor Threshold: No data available
pH: No data available
Melting Point: 1610 C
Boiling Point: 2230 C
Flash Point: No data available
Flammable Limits in Air: N/A

Vapor Pressure: N/A
Evaporation Rate (BuAc=1): N/A
Vapor Density (Air=1): N/A
Specific Gravity: 2.2
Solubility in Water: Practically Insoluble
Log Pow (calculated): No data available
Autoignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available
Percent Volatile by Volume: 0 at 21 °C

Section 10 Reactivity Data

Reactivity: Not generally reactive under normal conditions.
Chemical Stability: Stable under normal conditions.
Conditions to Avoid: None known.
Hazardous Polymerization: Will not occur

Section 11 Toxicity Data

Routes of Entry Inhalation, contact with Eyes.
Symptoms (Acute): Respiratory Irritation, Eye disorders
Delayed Effects: Respiratory disorders

Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
No data available	14808-60-7	Not determined	Not determined	Not determined

Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
Sand	14808-60-7	Listed	Listed	Listed

Chronic Effects:

Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: No evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.
Reproductive: No evidence of negative reproductive effects.
Target Organ Effects:
Acute: See Section 2
Chronic: Tests on laboratory animals indicate material may produce adverse mutagenic and reproductive effects.

Section 12 Ecological Data

Overview: This material is not expected to be harmful to the ecology.
Mobility: No data
Persistence: No data
Bioaccumulation: Bioconcentration is not expected to occur.
Degradability: Naturally occuring element. Does not biodegrade.
Other Adverse Effects: No data

Chemical Name	CAS Number	Eco Toxicity
N/A	14808-60-7	

Section 13 Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): This material is not considered to be a RCRA hazardous waste.

Section 14 Transport Information

Ground - DOT Proper Shipping Name:
Not regulated for transport by DOT.

Air - IATA Proper Shipping Name:
Not regulated for air transport by IATA.

Section 15 Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
No data available	14808-60-7	No	No	No	No	No

California Prop 65: WARNING: This product contains a chemical known to the state of California to cause cancer, birth defects or other reproductive harm.

Section 16 Additional Information

Revised: 09/03/2014 **Replaces: 09/03/2014** **Printed: 04-21-2015**

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Service Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DOT	U.S. Department of Transportation
IARC	International Agency for Research on Cancer
N/A	Not Available
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
ppm	Parts per million
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
IDLH	Immediately dangerous to life and health

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

Product Identifier

Material Name: **BRICK**

Trade Name: Brick
Chemical Family: Predominately Aluminum Silicates
Formula: Mixture

Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Intended Use: Building material used for structural support.

Supplier of the Safety Data Sheet

Glen-Gery Corporation
1166 Spring Street
Wyomissing, PA 19610-6001
Product Support/Technical Services Phone: (610) 562-3076

Emergency telephone number:
Corporate Office: (610) 374-4011
Technical Services: (610) 562-3076
Contact E-Mail: GGtech01@oldcastle.com

2. HAZARDS IDENTIFICATION

Appearance: Granular brick-shaped solid; comes in wide range of colors

Hazard Classification of the Substance or Mixture:

Skin irritation 2
Eye irritation 2A
Skin sensitization 1B
Carcinogenicity 1A
Specific target organ toxicity - Single exposure 3
Specific target organ toxicity - Repeated exposure 1

Signal Word: Danger

Hazard Statement: Brick dust may contain crystalline silica, a chemical that has been determined by certain agencies to cause cancer. See Section 11 for more information on health hazards.

Pictograms:

2. HAZARDS IDENTIFICATION

Precautionary Statements: Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. Do not breathe dust.

Response: If exposed or concerned: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If brick dust is inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.

Storage: Not Applicable

Disposal: Dispose of unused or unwanted brick products in accordance with all local, regional, national and international regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS Number	% Weight
Aluminum Silicates	Various	50 – 85
Quartz	14808-60-7	Varies
Chromium compounds	Various	0 – 3
Manganese compounds	Various	0 – 3
Iron Compounds as granular body additives	Various	0 – 3
Calcium compounds	Various	0 – 3

Additional Information: The above chemistries are provided for industrial hygiene and environmental purposes and are not intended to represent product specifications. This information has been compiled from data believed to be reliable. Elements such as aluminum, arsenic, boron, calcium, chromium, cobalt, copper, lead, molybdenum, nickel, tin, titanium, vanadium, and zirconium may be present in trace amounts. Brick products as shipped do not present an exposure hazard.

4. FIRST AID MEASURES

Description of First Aid Measures

Eye Contact: Flush with running water. Obtain medical assistance if irritation continues.

Skin Contact: Wash with soap and water. If an allergic reaction causes a rash that does not heal within a few days consult a physician. Treat abrasions as any other scrape or cut with disinfectants and bandages.

Ingestion: None (no known acute effects).

Inhalation: Remove from exposure to airborne particulates. Consult a physician if breathing does not return to normal.

Most Important Symptoms and Effects, Both Acute and Delayed

Symptoms and Effects of Exposure: For information on potential signs and symptoms of exposure, See Section 2 - Hazards Identification and/or Section 11 - Toxicological Information.

Medical Conditions Aggravated by Exposure: Excessive dust exposure may aggravate any existing respiratory disorders or diseases. Possible complications or allergies resulting in irritation to skin, eyes, and respiratory tract may occur from excessive exposure to dusts.

Recommendations for Immediate Medical Attention and Special Treatment Needed

Notes to Physician: Symptoms may not appear immediately.

Specific Treatments: In case of accident or if you feel unwell, seek medical advice immediately.

5. FIRE-FIGHTING MEASURES

Extinguishing Media: Not applicable

Special Hazards Arising from the Substance or Mixture

Hazardous Combustion Products: No data available

Fire / Explosion Hazards: Bricks as shipped do not pose a fire or explosion hazard.

Advice for Fire-Fighters

None

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions and Protective Equipment

Use personal protection recommended in Section 8.

Emergency Procedures

Not applicable.

Methods and Material for Containment and Cleaning Up

Not applicable.

Cleanup Procedures

Not applicable.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Minimize dust generation and accumulation. Avoid breathing dust. Use wet methods, especially when cutting brick to reduce the generation of dust.

Conditions for Safe Storage, Including any Incompatibilities

Storage Conditions: Always stack and store bricks in a stable manner to avoid falling hazards.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Aluminum Silicates	
OSHA PEL	15 mg/m^3
ACGIH TLV	10 mg/m^3
Quartz	
OSHA PEL	10 / $\%SiO_2$ + 2 mg/m^3
ACGIH TLV	0.025 mg/m^3 (respirable)
Chromium Compounds	
OSHA PEL	Not available
ACGIH TLV	Not available
Manganese Compounds	
OSHA PEL	Not available
ACGIH TLV	Not available
Iron Compounds as granular body additives	
OSHA PEL	Not available
ACGIH TLV	Not available
Calcium Compounds	
OSHA PEL	Not available
ACGIH TLV	Not available

Exposure Controls

Engineering Controls:	Provide adequate ventilation to maintain exposures below the OSHA PEL and ACGIH TLV for quartz and other substances.
Personal Protective Equipment:	Refer to applicable national standards and regulations in the selection and use of personal protective equipment (PPE).
Feet:	Use of steel toe shoes is recommended when handling brick.
Eyes and Face:	Face shields should be used when sawing brick.
Skin:	Use gloves and or protective clothing if abrasions or allergic reactions are experienced.
Respiratory protection:	For airborne concentration exceeding the OSHA PEL or ACGIH TLV use a NIOSH and/or MSHA approved respirator.
Other:	Use of wet sawing methods is recommended anytime that bricks must be cut.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Granular solid	**Color:**	Bricks come in a wide range of colors
Odor:	Essentially odorless	**Odor Threshold:**	No data available
Molecular Formula:	Mixture	**Molecular Weight:**	Mixture

Solvent Solubility: No data available
Water Solubility: Negligible
pH: No data available.
Melting/Freezing Point (°C): No data available
Boiling Point (°C): No data available
Partition Coefficient: (Method, pH, Endpoint, Value)
No data available
Decomposition Temperature (°C): No data available.

Evaporation Rate (Gram/s): No data available
Vapor Pressure (kPa): No data available
Vapor Density (g/ml): No data available
Relative Density: No data available
Viscosity: No data available

Flammability:

Autoignition Temperature (Solid) (°C):	No data available
Flammability (Solids):	No data available
Flash Point (Liquid) (°C):	No data available
Upper Explosive Limits (Liquid) (% by Vol.):	No data available
Lower Explosive Limits (Liquid) (% by Vol.):	No data available

10. STABILITY AND REACTIVITY

Reactivity: Bricks as shipped are not reactive
Chemical Stability: Stable under normal conditions of use
Possibility of Hazardous Reactions:

Oxidizing Properties:	No data available
Incompatible Materials:	No data available
Hazardous Decomposition Products:	No data available

11. TOXICOLOGICAL INFORMATION

Effects of Short Term and Long Term Exposure:

Short Term
Bricks as shipped do not present an inhalation, ingestion or contact hazard. However, operations such as sawing and grinding may result in the following effects.

Eye: May cause irritation by abrasion with dust or chips.

11. TOXICOLOGICAL INFORMATION

Skin: Brick dust or chips may cause allergic reactions in hypersensitive individuals; May cause cuts and skin abrasions.

Inhalation: Brick dust or chips may cause congestion and irritation in nasal and respiratory passages.

Ingestion: No known acute effects.

Long Term
Excessive exposures to respirable particulates (dust) over an extended period of time may result in the development of pulmonary diseases such as silicosis.

Information on Toxicological Effects
General Information: Toxicological properties of the formulation have not been investigated. The information in this section describes the potential hazards of crystalline silica. Brick dust may contain crystalline silica, a chemical that has been determined by certain agencies to cause cancer and other chemicals known to cause cancer, birth defects and other reproductive harm. Inhalation of brick dust above established or recommended exposure levels should be avoided by use of wet sawing or shaping and/or use of a NIOSH and/or MSHA approved respirator.

Carcinogen Status: The following carcinogenicity classifications for crystalline silica have been established by the following agencies:

OSHA: Not regulated as a carcinogen

IARC: Group 1 carcinogenic in humans

NIOSH: Carcinogen, with no further categorization

NTP: Known carcinogen

12. ECOLOGICAL INFORMATION

There are no known environmental impacts. No ecological consideration when used according to directions.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods: Dispose of waste in accordance with all applicable laws and regulations. State specific and Community specific provisions must be considered. It is recommended that waste minimization be practiced.

14. TRANSPORT INFORMATION

This material is not regulated for transportation as a hazardous material/dangerous good.

DOT: Bricks as shipped are not hazardous materials per DOT regulations.

15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

RCRA	Brick in its solid form is typically considered a non-hazardous waste for disposal, but local regulation may vary, therefore all waste must be disposed/recycled/reclaimed in accordance with federal, state, and local environmental control regulations. Water containing brick solids, such as from wet sawing operations, should also be disposed of in accordance with federal, state and local environmental regulation. Brick waste should not be used as a blasting agent.
EPCRA Section 311/312:	Bricks as shipped are not a Section 311/312 reportable product.
EPCRA Section 313:	Bricks as shipped are not subject to the Section 313, Toxic Chemical Release Inventory reporting requirements.
DOT:	Bricks as shipped are not hazardous materials per DOT regulations.
California Proposition 65:	This product contains crystalline silica, a substance known to the State of California to cause cancer. This product may contain trace amounts of heavy metals known to the State of California to cause cancer, birth defects, or other reproductive harm.

16. OTHER INFORMATION

Glen-Gery Corporation considers our product an "article" as defined in 30 CFR 1200(b)(g)(iv) and 40 CFR 372.38. As an article, an SDS is not required and the product is exempt from all other requirements of the hazard communication standard. OSHA requires an SDS for brick because it is occasionally dry sawed. We recommend only wet sawing of brick.

Data Sources:	The data contained in this SDS may have been gathered from confidential internal sources, raw material suppliers, or from the published literature.
Reasons for Revision:	Converted MSDS to SDS.
Prepared by:	The Glen-Gery Corporation

This SDS was prepared with information believed accurate at the time of preparation and was prepared and provided in good faith. However, the Glen-Gery Corporation assumes no responsibility as to the accuracy or suitability of such information and no warranty expressed or implied is made.

End of Safety Data Sheet

SAFETY DATA SHEET

1. Identification

Product identifier Sand and Gravel

Other means of identification

Synonyms To be completed by company based on specific products being marketed.

Recommended use Sand and Gravel aggregate may be used in the manufacture of bricks, mortar, cement, concrete, plasters, paving materials, and other construction materials. Sand and Gravel aggregate may be distributed in bags, totes, and bulk shipments.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company Name Pennsy Supply, Inc.

Address 1001 Paxton Street, Harrisburg, PA 17105

Telephone (717) 233-4511

Website http://pennsysupply.com/

E-mail contact@pennsysupply.com

Contact person Vice President, Health & Safety

Emergency phone number (717) 867-7584 office

2. Hazard(s) identification

Physical hazards Not classified.

Health Hazards

Carcinogenicity	Category 1A
Specific Target Organ Toxicity, Repeated Exposure	Category 2

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement May cause cancer. May cause damage to organs (lung) through prolonged or repeated exposure.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection.

Response If exposed or concerned: Get medical advice/attention.

Storage Restrict or control access to stockpile areas. Engulfment hazard: To prevent burial or suffocation, do not enter a confined space, such as a silo, bulk truck or other storage container or vessel that stores or contains aggregates without an effective procedure for assuring safety.

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

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information

Respirable Crystalline Silica (RCS) may cause cancer. Sand and Gravel is a naturally occurring mineral complex that contains varying quantities of quartz (crystalline silica). In its natural bulk state, sand and gravel is not a known health hazard. Sand and Gravel 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 and NTP; ACGIH states that it is a suspected cause of cancer. Other forms of RCS (e.g., tridymite and cristobalite) may also be present or formed under certain industrial processes.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Sand and Gravel	None	> 99
Crystalline Silica(Quartz)	14808-60-7	> 1

4. First-aid measures

Inhalation
Sand and Gravel dust: Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact
Sand and Gravel dust: Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact
Sand and Gravel dust: Immediately flush with plenty of water for at least 15 minutes. Hold eyelids apart. Occasionally lift the eyelid(s) to ensure thorough rinsing. Beyond flushing, do not attempt to remove material from the eye(s). Get medical attention if irritation develops or persists.

Ingestion
Sand and Gravel dust: Rinse mouth and drink plenty of water. Never give anything by mouth to an unconscious person. Get medical attention.

Most important symptoms/effects, acute and delayed
Inhaling dust may cause discomfort in the chest, shortness of breath, and coughing.
Prolonged inhalation may cause chronic health effects. This product contains crystalline silica. Prolonged or repeated inhalation of respirable crystalline silica liberated from this product can cause silicosis, and may cause cancer.

Indication of immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Pre-existing medical conditions that may be aggravated by exposure include disorders of the eye, skin and lung (including asthma and other breathing disorders). If addicted to tobacco, smoking will impair the ability of the lungs to clear themselves of dust.

5. Fire-fighting measures

Suitable extinguishing media
Sand and Gravel is not flammable. Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media
None known.

Specific hazards arising from the chemical
No unusual fire or explosion hazards noted. Not a combustible dust.

Special protective equipment and precautions for firefighters
Use protective equipment appropriate for surrounding materials.

Fire fighting equipment/instructions
No specific precautions.

Specific methods
Contact with powerful oxidizing agents may cause fire and/or explosions (see section 10 of SDS).

General fire hazards
No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, and emergency procedures
Wear appropriate protective equipment and clothing during clean-up of materials that contain or may liberate sand and gravel dust.

Methods and materials for containment and cleaning up
Spilled material, where dust is generated, may overexpose cleanup personnel to respirable crystalline silica-containing dust. Do not dry sweep or use compressed air for clean-up. Wetting of spilled material and/or use of respiratory protective equipment may be necessary.

Environmental precautions
Avoid discharge of fine particulate matter into drains or water courses.

7. Handling and storage

Precautions for safe handling
Do not handle until all safety precautions have been read and understood. Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage,
Avoid dust formation or accumulation.

8. Exposure controls/personal protection

Occupational exposure limits 1 – Value equivalent to OSHA formulas (29 CFR 1910.1000, 29 CFR 1917, 29 CFR 1918).
2 – Value also applies to MSHA Metal / Non-Metal (1973 TLVs at 30 CFR 56/57.5001).
3 – OSHA enforces 0.250 mg/m^3 in construction and shipyards (CPL-03-00-007).
4 – Value also applies to OSHA construction (29 CFR 1926.55, Appendix A) and shipyards (29 CFR 1915.1000, Table Z).
5 – MSHA limit = 10 mg/m^3.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Particulates not otherwise classified (CAS SEQ250)	PEL	5 mg/m3 15mg/m3	Respirable fraction. Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Crystalline Silica (Quartz) (CAS 14808-60-7)	TWA	0.3 mg/m3 0.1 mg/m3 2.4 mppcf	Total dust. 1,2 Respirable. 1,2,3 Respirable. 1,3,4
Particulates not otherwise classified (CAS SEQ250)	TWA	5 mg/m3 15 mg/m3 50 mppcf 15 mppcf	Respirable fraction. 1 Total dust. 1,4,5 Total dust. 1,4 Respirable fraction. 1
Tridymite and Cristobalite (other forms of crystalline silica) (CAS Mixture)	TWA	0.15 mg/m3 0.05 mg/m3 1.2 mppcf	Total dust. 1 Respirable. 1,2 Respirable. 1

US. ACGIH Threshold Limit Values®

Components	Type	Value	Form
Crystalline Silica (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.
Tridymite and Cristobalite (other forms of crystalline silica) (CAS Mixture)	TWA	0.025 mg/m3 10 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Crystalline Silica (CAS 14808-60-7)	TWA	0.05 mg/m3	Respirable dust.

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines OSHA PELs, MSHA PELs, and ACGIH TLVs are 8-hr TWA values. NIOSH RELs are for TWA exposures up to 10-hr/day and 40-hr/wk. Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled. Terms including "Particulates Not Otherwise Classified," "Particulates Not Otherwise Regulated," "Particulates Not Otherwise Specified," and "inert or Nuisance Dust" are often used interchangeably; however, the user should review each agency's terminology for differences in meanings.

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour indoors) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Use personal protective equipment as required.

Other Use personal protective equipment as required.

Respiratory protection When handling or performing work with sand and gravel that produces dust or respirable crystalline silica in excess of applicable exposure limits, wear a NIOSH-approved respirator

	that is properly fitted and is in good condition. Respirators must be used in accordance with all applicable workplace regulations.
Thermal hazards	Not anticipated. Wear appropriate thermal protective clothing, when necessary.
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

Appearance	
Physical state	Solid.
Form	Solid, particles.
Color	To be completed by company.
Odor	Not applicable.
Odor threshold	Not applicable.
pH	To be completed by company.
Melting point/freezing point	Not applicable.
Initial boiling point and boiling range	Not applicable.
Flash point	Non-combustible
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit – lower (%)	Not applicable.
Flammability limit – upper (%)	Not applicable.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	To be completed by company.
Solubility(ies)	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not applicable.
Viscosity	Not applicable.
Other information	
Explosive properties	Not applicable.
Flammability	Not applicable.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.

11. Toxicological information

Information on likely routes of exposure	
Inhalation	Repeated inhalation of respirable crystalline silica (quartz) may cause silicosis, a fibrosis (scarring) of the lungs. Silicosis is irreversible and may be fatal. Silicosis increases the risk of contracting pulmonary tuberculosis. Some studies suggest that repeated inhalation of respirable crystalline silica may cause other adverse health effects including lung and kidney cancer.
Skin contact	Sand and Gravel dust: May cause irritation through mechanical abrasion.
Eye contact	Sand and Gravel dust: May cause irritation through mechanical abrasion.

Ingestion	Not likely, due to the form of the product. However, accidental ingestion of the content may cause discomfort.
Symptoms related to the physical, chemical and toxicological characteristics	Sand and Gravel dust: Discomfort in the chest. Shortness of breath. Coughing.

Information on toxicological effects

Acute toxicity	Not expected to be acutely toxic.
Skin corrosion/irritation	This product is not expected to be a skin hazard.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization	No respiratory sensitizing effects known.
Skin sensitization	Not known to be a dermal irritant or sensitizer.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Respirable crystalline silica has been classified by IARC and NTP as a known human carcinogen, and classified by ACGIH as a suspected human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Crystalline Silica(Quartz) (CAS 14808-60-7)	1 Carcinogenic to humans.
Respirable Tridymite and Cristobalite (other forms of Crystalline) (CAS Mixture)	1 Carcinogenic to humans.

NTP Report on Carcinogens

Crystalline Silica(Quartz) (CAS 14808-60-7)	Known To Be Human Carcinogen.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity	Not expected to be a reproductive hazard.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity – repeated exposure	Respirable crystalline silica: May cause damage to organs (lung) through prolonged or repeated exposure.
Aspiration hazard	Due to the physical form of the product it is not an aspiration hazard.
Chronic effects	Prolonged inhalation of respirable crystalline silica may be harmful. May cause damage to organs (lungs) through prolonged or repeated exposure. 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.

12. Ecological information

Ecotoxicity	Not expected to be harmful to aquatic organisms. Discharging sand and gravel dust and fines into waters may increase total suspended particulate (TSP) levels that can be harmful to certain aquatic organisms.
Persistence and degradability	Not applicable.
Bioaccumulative potential	Not applicable.
Mobility in soil	Not applicable.
Other adverse effects	No other adverse environmental effects (e.g., ozone depletion, photochemical ozone creation potential, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Do not allow fine particulate matter to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with fine particulates. Dispose of contents in accordance with local/regional/national/international regulations.
Hazardous waste code	Not regulated.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty packaging materials should be recycled or disposed of in accordance with applicable regulations and practices.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

15. Regulatory information

US federal regulations

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

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - No
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated

US state regulations

US. Massachusetts RTK - Substance List

Crystalline Silica(Quartz) (CAS 14808-60-7)
Respirable Tridymite and Cristobalite (other forms of crystalline silica) (CAS Mixture)

US. New Jersey Worker and Community Right-to-Know Act

Crystalline Silica(Quartz) (CAS 14808-60-7)

Respirable Tridymite and Cristobalite (other forms of crystalline silica) (CAS Mixture)

US. Pennsylvania Worker and Community Right-to-Know Law

Crystalline Silica(Quartz) (CAS 14808-60-7)
Respirable Tridymite and Cristobalite (other forms of crystalline silica) (CAS Mixture)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

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

Crystalline Silica(Quartz) (CAS 14808-60-7)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date
06/01/2015
Revision date
06/01/2015
Version #
01
Disclaimer

This product should only be used by knowledgeable persons. While the information provided in this Safety Data Sheet is believed to provide a useful summary of the hazards, this product, as it is commonly used, 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. SELLER MAKES NO WARRANTY, EXPRESSED OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY Pennsy Supply, Inc. except that the product shall conform to contracted specifications. The information provided herein is believed by Oldcastle® to be accurate at the time of preparation. This SDS is prepared from sources believed to be reliable; however, 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 this 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 with respect to 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.

Ready Mix Concrete

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012

Date of issue: 06/01/2015 Revision date: 06/01/2015 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : Ready Mix Concrete

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Concrete is widely used as a structural component in construction applications

1.3. Details of the supplier of the safety data sheet

Pennsy Supply, Inc.
1001 Paxton Street
Harrisburg, PA 17105
(717) 233-4511
contact@pennsysupply.com

1.4. Emergency telephone number

CHEMTREC 800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin Corrosion 1A
Serious Eye Damage 1
Skin Sensitization 1
Specific Target Organ Toxicity - Single Exposure 3

This classification is based on the product as sold. If this product is processed in such a way that dust may be formed, other hazards may apply. This SDS is not applicable to the dust form of this product.

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :

GHS05 GHS07

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause respiratory irritation.

Precautionary statements (GHS-US) : Do not breathe dust/fume/gas/mist/vapours/spray. Wash hands thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing must not be allowed out of the workplace. Use only outdoors or in a well-ventilated area. If swallowed: rinse mouth. Do NOT induce vomiting. Immediately call a poison center/doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Immediately call a poison center/doctor. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

No additional information available.

2.4. Unknown acute toxicity (GHS US)

Not applicable.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable.

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Cement, portland, chemicals	(CAS No) 65997-15-1	10 - 35	Skin Irrit. 2 Eye Dam. 1 Skin Sens. 1 STOT SE 3
Calcium hydroxide	(CAS No) 1305-62-0	10 - 25	Skin Irrit. 2 Eye Dam. 1 STOT SE 3
Calcium oxide	(CAS No) 1305-78-8	≤5	Skin Corr. 1C
Magnesium oxide (MgO)	(CAS No) 1309-48-4	≤4	Not classified.
Gypsum (Ca(SO4).2H2O)	(CAS No) 13397-24-5	≤2	Not classified.
Quartz	(CAS No) 14808-60-7	<0.1	Carc. 1A[1] STOT RE 1[1]

[1] Only applies to airborne particles of respirable size.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

First-aid measures after skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Immediately call a POISON CENTER or doctor/physician.

First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Immediately call a POISON CENTER or doctor/physician.

First-aid measures after ingestion : If swallowed, do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : May be harmful if inhaled. May cause respiratory tract irritation.

Symptoms/injuries after skin contact : Causes severe skin burns. Symptoms may include redness, pain, blisters. Do not allow product to harden around any body part or allow continuous, prolonged contact with skin. May cause sensitization by skin contact.

Symptoms/injuries after eye contact : Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.

Symptoms/injuries after ingestion : May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Treat for surrounding material.

Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon.

5.3. Advice for firefighters

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.2. Methods and material for containment and cleaning up

For containment : Contain spill, then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up : Scoop up material and place in a disposal container. Allow the material to harden before disposal. Provide ventilation.

6.3. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/ spray. Do not swallow. Handle and open container with care. Avoid generating dust. When using do not eat, drink or smoke. Use only outdoors or in a well-ventilated area.

Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep out of the reach of children. Keep container tightly closed. Store in dry, cool, well-ventilated area.

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Cement, portland, chemicals (65997-15-1)		
ACGIH	ACGIH TWA (mg/m³)	1 mg/m³ (respirable fraction)
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction) 50 mppcf (<1% Crystalline silica)

Calcium hydroxide (1305-62-0)		
ACGIH	ACGIH TWA (mg/m³)	5 mg/m³
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)

Calcium oxide (1305-78-8)		
ACGIH	ACGIH TWA (mg/m³)	2 mg/m³
OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m³

Magnesium oxide (MgO) (1309-48-4)		
ACGIH	ACGIH TWA (mg/m³)	10 mg/m³ (inhalable fraction)
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (fume, total particulate)

Gypsum (Ca(SO4).2H2O) (13397-24-5)		
ACGIH	ACGIH TWA (mg/m³)	10 mg/m³ (inhalable fraction)
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)

Quartz (14808-60-7)		
ACGIH	ACGIH TWA (mg/m³)	0.025 mg/m³ (respirable fraction)
OSHA	OSHA PEL (TWA) (mg/m³)	(10 mg/m³)/(%SiO_2+2) TWA (respirable fraction) (30 mg/m³)/(%SiO_2+2) TWA (total dust) (250)/(%SiO_2+5) mppcf TWA (respirable fraction)

8.2. Exposure controls

Appropriate engineering controls : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Hand protection : Wear suitable waterproof gloves.

Eye protection : Wear approved eye protection (properly fitted dust- or splash-proof chemical safety goggles) and face protection (face shield).

Skin and body protection : Wear suitable waterproof protective clothing.

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. A NIOSH approved respirator is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded.

Environmental exposure controls	:	Maintain levels below Community environmental protection thresholds.
Other information	:	Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Semi-fluid, flowable, granular paste
Colour	:	Varies (usually gray)
Odour	:	None
Odour threshold	:	No data available
pH	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Flammability (solid, gas)	:	Not flammable
Explosive limits	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Vapour pressure	:	No data available
Relative density	:	No data available
Relative vapour density at 20 °C	:	No data available
Solubility	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Log Kow	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	No data available
Viscosity, kinematic	:	Varies
Viscosity, dynamic	:	No data available

9.2. Other information

No additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Heat. Incompatible materials.

10.5. Incompatible materials

Wet cement is alkaline and incompatible with acid, ammonium salts and aluminum metal. Cement dissolves in hydrofluoric acid, producing corrosive silicon tetrafluoride gas. Cement reacts with water to form silicates and calcium hydroxide. Silicates react with powerful oxidizers such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified.

Ready Mix Concrete	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	No data available
LC50 inhalation rat	No data available

Calcium hydroxide (1305-62-0)	
LD50 oral rat	7340 mg/kg

Calcium oxide (1305-78-8)	
LD50 oral rat	> 2000 mg/kg

Magnesium oxide (MgO) (1309-48-4)	
LD50 oral rat	> 5000 mg/kg

Skin corrosion/irritation : Causes severe skin burns.

Serious eye damage/irritation : Causes serious eye damage.

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Based on available data, the classification criteria are not met.

Carcinogenicity : Based on available data, the classification criteria are not met. Ready Mix Concrete contains crystalline silica that, when respirable, is classified by IARC and NTP as a known human carcinogen. Cutting, crushing or grinding hardened concrete or other crystalline silica-bearing materials will release respirable crystalline silica.

Quartz (14808-60-7)	
IARC group	1 - Carcinogenic to humans (airborne particles of respirable size)
National Toxicology Program (NTP) Status	2 - Known Human Carcinogens (airborne particles of respirable size)

Reproductive toxicity : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure) : May cause respiratory irritation.

Specific target organ toxicity (repeated exposure) : Based on available data, the classification criteria are not met. This product contains crystalline silica. Under normal use and application Ready Mix Concrete does not release crystalline silica. However, cutting, crushing or grinding hardened concrete or other crystalline silica-bearing materials will release respirable crystalline silica. Prolonged or repeated inhalation of respirable crystalline silica from this product can cause silicosis, a serious disabling and fatal lung disease.

Aspiration hazard : Based on available data, the classification criteria are not met.

Symptoms/injuries after inhalation : May be harmful if inhaled. May cause respiratory tract irritation.

Symptoms/injuries after skin contact : Causes severe skin burns. Symptoms may include redness, pain, blisters. Do not allow product to harden around any body part or allow continuous, prolonged contact with skin. May cause sensitization by skin contact.

Symptoms/injuries after eye contact : Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.

Symptoms/injuries after ingestion : May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability

Ready Mix Concrete	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Ready Mix Concrete	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available.

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Allow the material to harden before disposal. This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated for transport.

Additional information

Other information : No supplementary information available.

Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

Gypsum (Ca(SO4).2H2O)	CAS No 13397-24-5

15.2. US State regulations

Ready Mix Concrete	
State or local regulations	This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

SECTION 16: Other information

Date of issue : 06/01//2015

Other information : None.

Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

SAFETY DATA SHEET

ASPHALT REPAIR BLACKTOP PRODUCTS

R7 (APRIL 2015)

PACKAGE PAVEMENT COMPANY, INC.
675 Leetown Road
P.O. Box 408
Stormville, NY 12582

Office Phone: 845.221.2224
Additional Phone Number: 800.724.8193
Hours: Monday–Friday EST (8am - 4:30pm)
www.packagepavement.com

1. IDENTIFICATION

Product	Codes (Unit Weight):	Manufacturing Location (s)
Eco-Friendly All-Weather Blacktop Patch	102240 (40lb);102306 (60lb);102200 (80lb)	USA: Stormville, NY
Eco-Friendly HP Blacktop Repair	102205 (60lb); 102215 (50 lb w/handle)	Ravena, NY
Eco-Friendly Plate Patch	102606 (60lb)	Canada: None
Bulk Cold Mix	111115 (2000lb) ; 111116 (2000lb) ;	
HP Blacktop Repair Mix – Bulk	111118 (2000lb) ; 111119 (1000 kg)	
Plate Patch – Bulk	111130 (2000lb)	

Synonyms: Cold Mix, Blacktop Patch, Asphalt Cold Patch, Eco-Friendly Blacktop, Eco-Friendly Blacktop Repair, Regular Cold Patch

Product Description: Package Pavement Blacktop is a ready to use cold patching material used for repairing asphalt driveways, parking areas and potholes.

2. HAZARD(S) IDENTIFICATION

Health

GHS CLASSIFICATIONS (US)

- Acute toxicity (Oral): 4
- Acute toxicity (Dermal): 4
- Acute toxicity (Inhalation): 4
- Skin Irritation: 2
- Serious Eye Damage: 2A
- Skin Sensitization: 1B
- Carcinogenicity: 2A
- Specific Target Organ Toxicity – Single Exposure: 3
- Specific Target Organ Toxicity - Repeat Exposure: 2

GHS Label Symbols:

SKIN IRRITANT

POTENTIAL CARCINOGEN

Hazard Statements: WARNING!	*Prevention Statements* CAUTION:
• May cause skin irritation. • May be harmful if swallowed. • May cause an allergic skin reaction. • May cause respiratory irritation. • May cause cancer through chronic inhalation (silica) • May contain crystalline silica • Less than 50% of the mixture consists of ingredients of unknown acute toxicity.	• Do not eat, drink or use tobacco when using this product. • Do not expose product to unprotected skin • Wear proper PPE protection, protective gloves, eye/face protection • Use only in a well-ventilated area. • Store container tightly closed in cool/well-ventilated place. • Wash exposed areas of body thoroughly after handling.
Protective Gear Required (PPE):	
	
Eye Protection	**Safety Gloves**

3. COMPOSITION / INFORMATION ON INGREDIENTS

Name	CAS no.	Agency	Exposure Limits	Comments
Aggregate	Various	n/a	n/a	
Crushed Limestone	1317-65-3	OSHA OSHA NIOSH NIOSH	PEL-TWA 15 mg/m^3 PEL-TWA 5 mg/m^3 REL-TWA 10 mg/m^3 REL-TWA 5 mg/m^3	Total dust Respirable fraction Total dust Respirable fraction
Crystalline Silica (as alpha-Quartz)	14808-60-7	OSHA OSHA ACGIH	PEL-TWA [30 mg/m^3]/% SiO_2 + 2 PEL-TWA [10 mg/m^3]/% SiO_2 + 2 or [250 mppcf]/ % SiO_2 + 5 TLV-TWA 0.025R mg/m^3	Total dust Respirable dust Respirable dust Respirable fraction of aerosol
Petroleum Asphalt	8052-42-4	ACGIH NIOSH	TLV-TWA 0.5 mg/m^3 REL-STEL 5 mg/m^3	Inhalable fraction NIOSH Ceiling
Vegetable Oil Mists	120962-03-0	OSHA	PEL-TWA 15 mg/m^3 PEL-TWA 5 mg/m^3	Total Dust Respirable fraction

4. FIRST AID MEASURES

Primary Route(s) of Exposure:

- Inhalation
- Eye Contact
- Skin Contact
- Ingestion

Primary Health Hazards: Prolonged or repeated skin contact can cause drying of the skin which may produce irritation or dermatitis, ingestion will potentially cause stomach obstructions and irritation.

Inhalation: Dust caused by breaking, cutting or grinding hardened or set- in-place asphalt product may create airborne dust which may cause irritation to the throat and lungs. If breathing is difficult, remove person to a well ventilated area. Seek medical advice if the condition persists.

Eye Contact: Cutting, crushing or grinding hardened asphalt will release dust which may create irritation if in contact with eyes. Symptoms may include moderate eye irritation, redness and itching, tearing and blurred vision. Immediately flush out eye and eyelid with plenty of water for 15 minutes or more until the irritant is removed. Call a physician if irritation persists.
Skin Contact: Cold Patch asphalt may cause dry skin, discomfort, irritation and dermatitis. In case of contact thoroughly wash the affected area with pH balanced soap. Always wash work clothing before reuse.
Ingestion – Do not chew or ingest cold patch asphalt. If swallowed DO NOT induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately.

Medical Conditions Generally Aggravated by Exposure: Individuals with pre-existing skin conditions can be aggravated by exposure:

Acute Health Hazards: Dust may be a mechanical irritant to the eyes.
Chronic Health Hazards: Risk of injury depends on duration and level of exposure.

5. FIRE-FIGHTING MEASURES

Flash Point: >260 deg. C.
Flammable Limits:
LEL: ND
UEL: ND
Extinguishing Media: Dry Chemical, Foam or Carbon Dioxide. Water or foam may cause frothing.
Auto-Ignition Temperature: ND
Special Firefighting Procedures: Self-contained Breathing apparatus required for enclosed areas. Avoid breathing vapors for long periods.
Unusual Fire and Explosion Hazards: Do not store with strong oxidants. Heating or burning may cause the creation of carbon monoxide, carbon dioxide, and hydrocarbons.

6. ACCIDENTAL RELEASE MEASURES

Spillage Measures: If spilled, remove from bodies of water. Shovel into containers for reuse or disposal in accordance with local, state and federal guidelines. Recover and recycle as much as possible.

Waste Disposal Methods: Follow all applicable local, state and federal regulations for disposal.

7. HANDLING AND STORAGE

Do not store with strong oxidizers. Store away from heat sources and open flames. Product must be stored above freezing to remain workable.

KEEP OUT OF REACH OF CHILDREN

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Primary Health Hazards: Prolonged or repeated skin contact can cause drying of the skin which may produce irritation or dermatitis. Airborne dust can cause immediate or delayed irritation or inflammation proper protective gear and handling procedures will limit exposure levels.

Personal Protective Equipment (PPE): Wear a dust mask when breaking, crushing or grinding of this product. Wear ANSI approved glasses or Safety goggles when handling both the packaging and when applying the product.. (Wearing contact lenses when using polymeric sand is not recommended.) The use of waterproof gloves is highly recommended to prevent exposure to skin and body.
Respiratory Protection: Not applicable when applying this product but may be applicable when breaking, crushing or grinding hardened product. In case of exposure to high levels of airborne dust, a NIOSH/MSHA approved dust respirator is recommended (when allowable exposure limits may be exceeded).
Other Protective Clothing or Equipment: Protective outer garments including long sleeve shirts, workpants, boots and gloves should be used to prevent skin or eye exposure when applying this product.
Engineering Controls: Use only in well-ventilated areas.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin in accordance with above good practices. Wash thoroughly after handling and before eating or drinking. Following work, workers should shower with soap and water and clean clothing before reuse.
Environmental Exposure: This product does not present any particular risk for the environment. Refer to applicable national, state and local regulations.

WARN EMPLOYEES AND/OR CUSTOMERS OF THE HAZARDS AND REQUIRED OSHA PRECAUTIONS ASSOCIATED WITH THE USE OF THIS PRODUCT.

9. PHYSICAL & CHEMICAL PROPERTIES

Physical State:	Mobile granular solid, opaque black in appearance
Boiling Point (at 760mm Hg):	No Data Available
Vapor Pressure (mm Hg):	N/A
Vapor Density (air = 1):	>1
Flash Point	>260 deg. C. (500 deg. F) Cleveland Open Cup
Specific Gravity (water = 1):	2.694 AASHTO – T209
Melting Point:	Not Determined
Evaporation Rate (Butyl acetate = 1):	N/A
Solubility in Water (% by weight):	Insoluble
pH:	N/A
Freezing Point:	N/A

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Avoid contact with water and keep dry until used to preserve product utility.
Incompatibility: Strong oxidizers.
Hazardous Polymerization: Will not occur.
Hazardous Decomposition or By-Products: If exposed to fire this product may emit hazardous compounds include carbon monoxide, carbon dioxide and oxides of nitrogen and sulfur, as well as, traces of incompletely burned carbon compounds may be produced.

11. TOXICOLOGICAL INFORMATION

Petroleum Based Asphalts :
In 2011, the IARC (International Agency for Research on Cancer) classified exposure to straight-run bitumen's and their emissions during road paving has been classified by IARC as Group 2B, possibly carcinogenic to humans. Although there is some indication of increased lung and skin cancer rates in animals and humans, epidemiological studies have been inconclusive.

Routes of Exposure: Inhalation, Skin Contact, Eye Contact and Ingestion

- ***Inhalation:*** Exposure to dust from this product is generally related to the breaking, cutting or grinding set-in-place or hardened asphalt. In these cases the product may cause slight irritation. Prolonged or frequent exposure to dust contact can cause irritation to the dermatitis
- ***Skin Contact:*** Skin contact of this product may cause slight irritation. Prolonged or frequent contact can cause irritation to the dermatitis.
- ***Eye Contact:*** If in contact with the eyes, can cause irritation to the eyelids, cornea (conjunctivitis) and lesions to the eyeball.
- ***Ingestion:*** If swallowed it can cause burns to the mouth, esophagus and stomach.

Toxicity to Animals:
LD50: Not Available
LC50: Not Available

Chronic Effects on Humans: Condition aggravated by exposure includes eye disease, skin disorders and chronic respiratory conditions.

Special Remarks on Toxicity: Not Available

12. ECOLOGICAL INFORMATION

Eco-Toxicity: This material may be toxic to fish and other aquatic life and may impede growth of vegetation.
BOD_5 and COD: Not available.
Products of Biodegradation: Not available.
Potential to Bioaccumulate: Not available
Toxicity of the Products of Biodegradation: Not available.
Special remarks on the Products of Biodegradation: Not available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Use hardened or unused asphalt as a base for application of new product or Dispose of unusable material via licensed waste disposal company in accordance with local, state, and federal guidelines.

14. TRANSPORT INFORMATION

DOT/UN: Non-regulated
DOT Hazard Class: Non-regulated
Shipping Name: Non-regulated
Not regulated as a hazardous waste material by the U.S. Department of Transportation and TDG Regulations.

15. OTHER REGULATORY INFORMATION

US OSHA 29CFR 1910.1200: Considered hazardous under this regulation and should be included in the employer's hazard communication program.
SARA (Title III) Sections 311 and 312: Not determined.
SARA (Title III) Section 313: Not subject to reporting requirements.
TSCA (May 1997): All components are on the TSCA inventory list.
Federal Hazardous Substance Act: Is a hazardous substance subject to statues promulgated under the subject act.
Canadian Environmental Protection Act: Not Listed.
Canadian WHMIS: Considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulation and subject to the requirements of Health Canada's Workplace Hazardous Material Information (WHMIS). This product has been classified according to the hazard criteria of the Controlled Products Regulation (CPR). This document complies with the WHMIS requirements of the Hazardous Products Act (HPA) and the CPR.

16. ADDITIONAL INFORMATION

GHS Safety Standards Guide:
The new UN Global Harmonization System (GHS) of safety and hazard identification standards were adopted by OSHA in 2012 and will be implemented in June 1st 2015. This includes standardized pictograms to identify the hazards that are present in manufactured, blended or distributed products for use in the workplace. The GHS standards feature a new numerical system to identify the levels of toxicity of the product.
The risk levels associated with this product are listed in section #2 of the 16 sections included in this guide. The new numbers are arranged on a scale of 1-5 with 1 being a severe hazard and 5 presenting minimal hazard when used under the product's instruction and when in compliance with applicable, local, state and federal guidelines.

1 = Severe Hazard
2 = Serious Hazard
3 = Moderate Hazard
4 = Slight Hazard
5 = Minimal Hazard

Health Hazards are further defined in categories for all routes of exposure including, pulmonary(inhalation), oral (mouth), dermal (skin), and ocular (eyes).
These Hazard Categories and the corresponding warning classifications are:

Acute Toxicity (Oral) - [1,2,3,4,5]
Acute Toxicity (Dermal) - [1,2,3,4,5]
Acute Toxicity (Inhalation) - [1,2,3,4,5]
Skin Corrosion/Irritant - [1A , 1B - *Corrosion* 2,3 - *Irritant*]
Eye Corrosion/Irritant - [1, 2A, 2B]
Respirator Sensitization - [1 , 2A, 2B]
Skin Sensitization - [1A ,1B, 2]
Germ Cell Mutagenicity - [1A, 1B, 2]
Carcinogenicity - [1A ,1B, 2]
Reproductive Toxicity - Fertility - [1A ,1B, 2]
Reproductive Toxicity - Development - [1A ,1B, 2]
Specific Target Organ Toxicity - Single Exposure [1, 2, 3]
Specific Target Organ Toxicity - Repeat Exposure [1, 2]

For more information visit the OSHA website: www.osha.gov

Date Prepared: 04/1/2015

User's Responsibility: This information is compiled from sources believed to be accurate or otherwise technically correct. It is the user's responsibility to determine if this information is suitable for their application and to follow safety precautions as may be necessary.

Revision R7, supersedes all previous revisions.

Disclaimer: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. This information is based on the specific material contained on this document and used in a manner only for which the product was intended. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products.

OIL-DRI
CORPORATION OF AMERICA

SAFETY DATA SHEET
Oil-Dri Mighty Sweep

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Oil-Dri Mighty Sweep

SDS Number: 1200002

Manufacturer:	Oil-Dri Corporation of America 410 North Michigan Avenue Chicago, IL 60611 +1-312-321-1515
TRANSPORTATION EMERGENCY INFORMATION:	Chemtrec +1-800-424-9300 (US and Canada) +1-703-527-3887 (International - Call Collect)

Product Use: Floor Sweeping Compound

Restrictions On Use: None expected.

2. HAZARDS IDENTIFICATION

GHS Classification:

Health:

Carcinogen Category 1A

Specific Target Organ Toxicity - Repeat Exposure Category 1

Environmental: Not Hazardous

Physical: Not Hazardous

GHS Labeling:

Pictogram:

Health Hazard

DANGER!

H350 May cause cancer by inhalation.

H372 Causes damage to lungs through prolonged or repeated exposure by inhalation.

Prevention:

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe dust.

P264 - Wash thoroughly after handling

P280 Wear protective gloves and clothing.

P270 Do not eat, drink or smoke when using this product.

Response: P308 + P313 IF exposed or concerned: Get medical advice/attention.

Storage: Store in a dry area.

Disposal: P501 Dispose of contents/container in accordance with all local and national regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No./ EINECS-No	%
Dolomitic Limestone	16398-88-1	Proprietary
Wood Dust	Mixture	Proprietary
Hydrotreated Light Paraffinic Petroleum Distillates	64742*55-8	1-10%
Crystalline Silica	14808-60-7	0.1-1%

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If irritation or other symptoms occurs, get medical attention.

Skin contact: No first aid should be needed.

Eye contact: Immediately flush eyes with cool running water, lifting upper and lower lids. If irritation persists or for foreign body in the eye, get medical attention.

Ingestion: If used material is ingested, get medical attention due to possibility of chemical contamination. If large amount of unused material is swallowed, get immediate medical attention.

Most Important symptoms and effects, both acute and delayed: Eye contact may cause mechanical irritation and possible eye injury. May cause mechanical skin and respiratory irritation. May cause cancer if respirable dust is inhaled over prolonged periods.

Indication of any immediate medical attention and special treatment needed: No immediate medical attention is required.

5. FIREFIGHTING MEASURES

Suitable Extinguishing Media: Use water, foam, or carbon dioxide to extinguish fire. Cool fire exposed container with water.

Specific Hazards Arising from the Chemical: This product is not flammable but the wood dust will burn under fire conditions. Thermal decomposition may produce carbon monoxide, carbon dioxide and smoke.

Special Protective Equipment and Precautions for Fire-fighters: Firefighters should always wear self-contained breathing apparatus and full protective clothing for fires involving chemicals or in confined spaces.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures: No special equipment is generally required for spill clean-up. For dusty conditions, an approved respirator may be needed. Refer to Section 8 for additional information.

Environmental Hazards: Report releases as required by local and federal regulations.

Methods and Materials for Containment and Cleaning Up: Eliminate ignition sources. Sweep up and collect for re-use or disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Wash thoroughly with soap and water after use. If clothing becomes dusty, launder before re-use.

Conditions for Safe Storage, including any Incompatibilities: Store in a dry area. Keep away from ignition sources. Store away from oxidizers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limit(s)

Chemical Name	Exposure limit(s)
Dolomitic Limestone	5 mg/m³ (respirable dust) TWA OSHA PEL 15 mg/m³ (total dust) TWA OSHA PEL 1 mg/m³ (inhalable dust) TWA ACGIH TLV
Wood Dust	5 mg/m³ (respirable dust) TWA OSHA PEL 15 mg/m³ (total dust) TWA OSHA PEL 1 mg/m³ (inhalable dust) TWA ACGIH TLV
Hydrotreated Light Paraffinic Petroleum Distillates	PEL - 5 mg/m³ TWA (as oil mist) TLV - 5 mg/m³ TWA (inhalable fraction) (as mineral oil)
Crystalline Silica	30 mg/m³ / %Si02+2 (total dust) TWA OSHA PEL 10 mg/m³ / %Si02+2 (respirable dust) TWA OHA PEL 0.025 mg/m³ (respirable dust) TWA ACGIH TLV

Appropriate Engineering Controls: General ventilation is adequate for normal use. If handling produces airborne dust, local exhaust ventilation may be needed.

Individual Protection Measures, such as Personal Protective Equipment:

Eye Protection: Safety glasses or goggles recommended.

Skin Protection: None required for normal use.

Respiratory Protection: None required for normal use. For operations where the dust concentration may be excessive, a dust respirator may be used. Follow OSHA regulations in the selection and use of respiratory protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Value
Appearance:	Granular Solid
Odor Threshold:	Slight paraffinic odor
Boiling point/range	Not applicable.
Melting point/range	Not available
Relative density	Not available
Vapor pressure	Not applicable.
Vapor density (air=1)	Not applicable.
Solubility	Water Insoluble
pH	Not applicable.
Partition coefficient (n-octanol/water):	Not available
Evaporation Rate (Butyl acetate=1)	Not applicable.
Viscosity:	Not applicable.
Volatile Organic Carbon Compounds (VOC) (g/L)	Not available
Flashpoint:	Not applicable.
Flammable Limits in Air % by Volume:	LEL (Lower):Not applicable. UEL (Upper): Not applicable.
Autoignition temperature:	Not available
Decomposition temperature:	Not available
Flammability (solid, gas):	Not flammable but will burn in fire conditions.

10. STABILITY AND REACTIVITY

Reactivity: Not normally reactive.

Chemical Stability: Stable

Possibility of Hazardous Reactions: Reaction with oxidizers, acids, or Fluorine will generate heat and may cause fire.

Conditions to Avoid: Avoid extreme heat

Incompatible Materials: Strong oxidizing agents, acids, and Fluorine.

Hazardous Decomposition Products: Thermal decomposition may produce carbon monoxide, carbon dioxide and smoke.

11. TOXICOLOGICAL INFORMATION

Potential Health Effects:

Acute Hazards:

Inhalation: Inhalation of dust may cause irritation to the eyes, nose, throat and respiratory tract.

Skin contact: No known hazard.

Eye contact: Contact may cause mechanical, abrasive irritation with possible injury.

Ingestion: No known hazard.

Chronic Effects: Inhalation of excessive concentrations of any dust, including this material, may lead to lung injury. This product contains both wood dust and crystalline silica. Wood dust and crystalline silica have been classified by the International Agency for Research on Cancer (IARC) as "carcinogenic to humans" (Group 1) and "known to be a human carcinogen" by the National Toxicology Program (NTP). This classification is based primarily on increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to wood dust. The physical form of this product is such that no exposure to wood dust is likely under normal conditions of use, therefore the risk of adverse health effects is minimal.

Carcinogenicity Listing: The International Agency for Research on Cancer (IARC), in Monograph 100C has concluded that crystalline silica inhaled in the form of quartz, is carcinogenic to humans (Group 1). Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs. The National Toxicology Program (NTP) classifies crystalline silica as a known carcinogen. Applications and exposure data indicate that exposure to respirable quartz in this product with normal use is well below the OSHA Permissible Exposure Limit (PEL) and ACGIH Threshold Limit Value (TLV). The manufacturer is not aware of any scientific or medical data available indicating that exposure to respirable crystalline silica from this product under conditions of normal use will cause silicosis or cancer. Adverse effects would not be expected from normal use of this product. Wood dust has been classified by the International Agency for Research on Cancer (IARC) as "carcinogenic to humans" (Group 1) and "known to be a human carcinogen" by the National Toxicology Program (NTP). This classification is based primarily on increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to wood dust. The physical form of this product is such that no exposure to wood dust is likely under normal conditions of use, therefore the risk of adverse health effects is minimal.

Acute Toxicity Values: Wood Dust: No toxicity data available
Dolomitic Limestone: No toxicity data available
Hydrotreated Light Paraffinic Petroleum Distillates: Oral rat LD50 >5000 mg/kg.
Dermal rabbit LD50>2000 mg/kg
Inhalation rat LC50

Silica:	LD50	oral	rat	22,500	mg/kg

LC50 carp > 10,000mg/L/72 hr.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Hydrotreated Light Paraffinic Petroleum Distillates: 96 hr LL50 Pimephales promelas >100 mg/kg; 48 hr daphnia magna EL50 > 10000 mg/L; 72 hr NOEL Pseudokirchnerella subcapitata>100 mg/L. No adverse effects on the environment are expected.

Persistence and Degradability: Wood dust will degrade in the environment. Dolomitic Limestone is not degradeable. Hydrotreated Light Paraffinic Petroleum Distillates are not readily biodegradeable.

Bioaccumulative Potential: Not bioaccumulative.

Mobility in Soil: No data available

Other Adverse Effects: None currently known.

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with local, state and federal environmental Regulations. Unused material is suitable for disposal in sanitary landfill. Used material may be subject to regulation, depending on the nature of the material absorbed. Check with appropriate regulatory authority for used material containing hazardous waste.

14. TRANSPORT INFORMATION

US DOT Shipping Description: Not regulated

IATA Shipping Description (Air): Not regulated

Proper Shipping Name: Not regulated

UN Number: Not applicable.

Packing Group: Not applicable.

Labels Required: None.

15. REGULATORY INFORMATION

US Regulations

SARA 311/312 Hazard Categories: Chronic Health

SARA 313 This Product Contains the Following Chemicals Subject to Annual Release Reporting Requirements Under the SARA Section 313 (40 CFR 372): None.

SARA 302 Listed Chemicals: None.

CERCLA: This product is not subject to CERCLA release reporting. Many states have more stringent reporting requirements. Report releases as required by local and state regulations.

California Proposition 65: This product contains respirable crystalline silica, wood dust, and D&C Red No. 19 which are known to the State of California to cause cancer.

EPA Toxic Substances Control Act (TSCA): All of the components of this product are listed on the TSCA Inventory or exempted from TSCA.

International Regulations:

EU REACH: Contact Oil Dri for information on REACH status.

Japan MITI: No data available

AICS: No data available

16. OTHER INFORMATION

Date Prepared: 4/5/2016

Revision Summary: December 17, 2014 – Conversion to Hazcom 2012 classification and labeling and format.

April 5, 2016 - SDS reformatted, Sections 1-16 rewritten.

HMIS Rating: Health 1* Fire 1 Reactivity 0

0 = Minimal Hazard, 1 = Slight Hazard, 2 = Moderate Hazard, 3 = Serious Hazard, 4 = Severe Hazard

The information contained herein is true and correct to the best of Oil-Dri Corporation of America's knowledge. However, no warranty, expressed or implied, is made. Nothing herein should be interpreted as a recommendation to infringe existing patents or violate any laws or regulations. Final determination of the suitability of the material is the sole responsibility of the user.