

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Issue date: 2022-10-18 Revision date: 2022-10-18

Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Product name : High Calcium Lime Kiln Dust

Product code : Not available
Product type : Solid

Other means of identification : High Calcium Lime Kiln Dust, Lime Kiln Dust, LKD.

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Neutralization, Stabilization, Absorption, Biosolids Stabilisation.

1.3. Supplier

Manufacturer

GRAYMONT #200-10991 Shellbridge Way

Richmond, BC V6X 3C6 - Canada T 1 604 207-4292 - F 1 604 207-9014

Distributor

Graymont Western US Inc 585 W Southridge Way

Sandy, Utah 84070 - United States

T +1 801-262-3942

1.4. Emergency telephone number

Emergency number : CHEMTREC, US (800-424-9300), INTERNATIONAL: (703-527-3887)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS classification

Skin corrosion/irritation, Category 2

Serious eye damage/eye irritation, Category 1

Carcinogenicity Category 1A

Specific target organ toxicity - Single exposure, Category 3

Specific target organ toxicity - Repeated exposure, Category 1

2.2. GHS Label elements, including precautionary statements

GHS labelling

Hazard pictograms (GHS)







Signal word (GHS) : Danger

Hazard statements (GHS) : Causes skin irritation.

Causes serious eye damage. May cause respiratory irritation. May cause cancer (Inhalation).

Causes damage to organs (lungs) through prolonged or repeated exposure.

Precautionary statements (GHS) : Obtain special instructions before use.

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

Do not breathe dust/fume/gas/mist/vapours/spray.

Wash hands, forearms and face thoroughly after handling.

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Do not eat, drink or smoke when using this product

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

If exposed or concerned: Get medical advice/attention.

If on skin: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

If skin irritation occurs: Get medical advice/attention.

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.

Immediately call a poison center or doctor.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Chemical name / Synonyms	Product identifier	%
Limestone	Limestone Chalk / Limestone (A noncombustible solid characteristic of sedimentary rock. It consists primarily of calcium carbonate.) / Natural calcium carbonate / Marble / Calcium carbonate / Limestone (sedimentary rock) / Calcite / Limestone ground / Acetate, 4-methyl-2-propyl-2H-tetrahydropyran-4-yl / Ground limestone	CAS-No.: 1317-65-3	50 – 75
Calcium oxide	Calcium oxide Lime / Quicklime / CALCIUM OXIDE / Quicklime (CaO) / Calcium oxide (CaO) / Lime (calcium oxide)	CAS-No.: 1305-78-8	0 – 55
Magnesium oxide (MgO)	Magnesium oxide (MgO) Calcined magnesite / Magnesium oxide / MAGNESIUM OXIDE / Magnesia	CAS-No.: 1309-48-4	1 – 5
Calcium hydroxide	Calcium hydroxide Calcium dihydroxide / Calcium hydroxide (Ca(OH)2) / Hydrated lime / Lime, hydrated / CALCIUM HYDROXIDE / Slaked lime	CAS-No.: 1305-62-0	1 – 5

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Name	Chemical name / Synonyms	Product identifier	%
Quartz	Quartz Quartz (SiO2) / Silica, crystalline, quartz / Crystalline silica, quartz / .alphaQuartz / Silica, crystalline, .alphaquartz / QUARTZ / Crystalline silica in the form of quartz / Quartz, silica / Quartz (respirable fraction) / Silica dust / Silica, crystallinealpha.quartz / Silica, .alphaquartz / Silicon dioxide / Silica, quartz / Silica, crystalline / Quartz (crystalline silica) / Silica dust, crystalline / QUARTZ POWDER / Silica, crystalline (quartz)	CAS-No.: 14808-60-7	0.0001 – 1

Comments

Crystalline silica has been found in some products at or above detection level 0.1%. Concentration is dependent upon limestone source.

Any concentration shown as a range is to protect confidentiality or is due to batch variation. If a generic chemical name is shown and/or the CAS number is not disclosed, the specific chemical identity has been withheld as a trade

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation

First-aid measures general

: IF exposed or concerned: Get medical advice/attention.

: If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

First-aid measures after skin contact

: IF ON SKIN: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact

: 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.

First-aid measures after ingestion

: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation

Symptoms/effects after skin contact

: May cause irritation to the respiratory tract.

: Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin. May cause burns in the presence of moisture. Skin contact during hydration may slowly develop sufficient heat that may cause severe burns possibly resulting in permanent injury. Do not allow product to harden around any body part or allow continuous, prolonged contact with skin.

Handling can cause dry skin.

Symptoms/effects 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/effects after ingestion

: May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and

Chronic symptoms

: May cause cancer. Causes damage to organs through prolonged or repeated exposure.

4.3. Immediate medical attention and special treatment, if necessary

Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media : Do not use water jet.

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5.2. Specific hazards arising from the chemical

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

5.3. Special protective equipment and precautions for fire-fighters

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.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. 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

: Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. . Provide ventilation.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes. Do not breathe dust. Do not swallow. Wash hands, forearms and face thoroughly after handling. Handle and open container with care. When using do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Avoid generating dust. The use of compressed air for cleaning clothing, equipment, etc, is not recommended. Good housekeeping is important to prevent accumulation of dust. Wear appropriate PPE (see Section 8).

Hygiene measures

: Wash contaminated clothing before reuse. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions

: Keep out of the reach of children. Keep container tightly closed. Store locked up. Store in a well-ventilated place. Store in dust-tight, dry, labelled containers. Avoid any dust buildup by frequent cleaning and suitable construction of the storage area.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1. Control parameters			
High Calcium Lime Kiln Dust			
No additional information available			
Limestone (1317-65-3)			
Canada (Alberta) - Occupational Exposure Limits			
OEL TWA	10 mg/m³		
Canada (Quebec) - Occupational Exposure Limits			
VEMP (OEL TWA)	10 mg/m³ (Limestone, containing no Asbestos and <1% Crystalline silica-total dust)		
Canada (British Columbia) - Occupational Exposure	e Limits		
OEL TWA	10 mg/m³ (total dust) 3 mg/m³ (respirable fraction)		
OEL STEL	20 mg/m³ (total)		
Canada (Saskatchewan) - Occupational Exposure L	imits		
OEL TWA	10 mg/m ³		
OEL STEL	20 mg/m³		
USA - OSHA - Occupational Exposure Limits			
OSHA PEL TWA [1]	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)		
USA - NIOSH - Occupational Exposure Limits			
NIOSH REL TWA	10 mg/m³ (total dust) 5 mg/m³ (respirable dust)		
Calcium oxide (1305-78-8)	Calcium oxide (1305-78-8)		
Canada (Alberta) - Occupational Exposure Limits			
OEL TWA	2 mg/m³		
Canada (Quebec) - Occupational Exposure Limits			
VEMP (OEL TWA)	2 mg/m³		
Canada (British Columbia) - Occupational Exposure	e Limits		
OEL TWA	2 mg/m³		
Canada (Ontario) - Occupational Exposure Limits			
OEL TWA	2 mg/m³		
Canada (Saskatchewan) - Occupational Exposure Limits			
OEL TWA	2 mg/m³		
OEL STEL	4 mg/m³		
USA - ACGIH - Occupational Exposure Limits			
Local name	Calcium oxide		
ACGIH OEL TWA	2 mg/m³		
Remark (ACGIH)	TLV® Basis: URT irr		
Regulatory reference	ACGIH 2020		

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Calcium oxide (1305-78-8)			
USA - OSHA - Occupational Exposure Limits			
Local name	Calcium oxide		
OSHA PEL TWA [1]	5 mg/m³		
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1		
USA - IDLH - Occupational Exposure Limits			
IDLH	25 mg/m³		
USA - NIOSH - Occupational Exposure Limits			
NIOSH REL TWA	2 mg/m³		
USA - MSHA - Occupational Exposure Limits			
MSHA PEL TWA 8/40 h	2 mg/m³		
Magnesium oxide (MgO) (1309-48-4)			
Canada (Alberta) - Valeurs limites d'exposition prof	essionnelle		
OEL TWA	10 mg/m³ (fume)		
Canada (Québec) - Valeurs limites d'exposition prof	fessionnelle		
VEMP (OEL TWA)	10 mg/m³ (inhalable dust)		
Canada (Colombie-Britannique) - Valeurs limites d'e	exposition professionnelle		
OEL TWA	10 mg/m³ (fume, inhalable) 3 mg/m³ (respirable dust and fume)		
OEL STEL	10 mg/m³ (respirable dust and fume)		
Canada (Ontario) - Valeurs limites d'exposition prof	Canada (Ontario) - Valeurs limites d'exposition professionnelle		
OEL TWA	10 mg/m³ (inhalable particulate matter)		
Canada (Saskatchewan) - Valeurs limites d'expositi	on professionnelle		
OEL TWA	10 mg/m³ (inhalable fraction)		
OEL STEL	20 mg/m³ (inhalable fraction)		
USA - ACGIH - Occupational Exposure Limits			
ACGIH OEL TWA	10 mg/m³ (inhalable particulate matter)		
ACGIH chemical category	Not Classifiable as a Human Carcinogen		
USA - OSHA - Occupational Exposure Limits			
OSHA PEL TWA [1]	15 mg/m³ (fume, total particulate)		
USA - IDLH - Occupational Exposure Limits			
IDLH	750 mg/m³ (fume)		
USA - MSHA - Occupational Exposure Limits			
MSHA PEL TWA 8/40 h	10 mg/m³ (inhalable particulate matter)		
Calcium hydroxide (1305-62-0)			
Canada (Alberta) - Occupational Exposure Limits			
OEL TWA	5 mg/m³		
Canada (Quebec) - Occupational Exposure Limits			
VEMP (OEL TWA)	5 mg/m³		

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Canada (British Columbia) - Occupational Exposure Limits OEL TWA Smg/m² Canada (Saskatchewan) - Occupational Exposure Limits OEL TWA Smg/m² Canada (Saskatchewan) - Occupational Exposure Limits OEL TWA Smg/m² OEL STEL 10 ng/m² USA - ACGIH - Occupational Exposure Limits ACGIH OCCUpational Exposure Limits OEL TWA Smg/m² USA - ACGIH - Occupational Exposure Limits OSHA PEL TWA [1] Smg/m² ((respirable fraction) USA - NISHA - Occupational Exposure Limits NIOSH REL TWA Smg/m² (respirable fraction) USA - MISHA - Occupational Exposure Limits NISHA - Occupational Exposure Limits NISHA - Occupational Exposure Limits NISHA - Occupational Exposure Limits OEL TWA O.025 mg/m² (respirable particulate) OEL TWA O.025 mg/m² (respirable particulate) OEL TWA O.025 mg/m² (respirable particulate) OEL TWA O.025 mg/m² (respirable dust) Canada (Alberta) - Occupational Exposure Limits VEMP (OEL TWA) O.1 mg/m² (respirable dust) Canada (Guebec) - Occupational Exposure Limits VEMP (OEL TWA) O.25 mg/m² (respirable) Notations and remarks ACGIH Caranogenicity actegory A2; IARC group 1 caranogen OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC) Canada (Oratrio) - Occupational Exposure Limits OEL TWA O.025 mg/m² (respirable) OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC) Canada (Oratrio) - Occupational Exposure Limits OEL TWA O.055 mg/m² (respirable) OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC) Canada (Saskatchewan) - Occupational Exposure Limits OEL TWA O.055 mg/m² (respirable particulate matter) Cemark (ACGIH) USA - ACGIH - Occupational Exposure Limits OEL TWA O.055 mg/m² (respirable particulate matter) VEMP (OEL TWA) O.055 mg/m² (respirable particulate matter)	Calcium hydroxide (1305-62-0)		
Canada (Ontario) - Occupational Exposure Limits OEL TWA Smg/m³ Canada (Saskatchewan) - Occupational Exposure Limits OEL TWA Smg/m³ OEL STEL 10 mg/m³ OEL STEL 10 mg/m³ USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA 5 mg/m² OEL STEL 15 mg/m³ (total dust) USA - OCHA - Occupational Exposure Limits NOSH - Occupational Exposure Limits NOSH - Occupational Exposure Limits NOSH - Occupational Exposure Limits NOSH REL TWA Smg/m² (respirable fraction) USA - MISHA - Occupational Exposure Limits NSHA - Occupational Exposure Limits NSHA - Occupational Exposure Limits NSHA - Occupational Exposure Limits NSHA - Decupational Exposure Limits NSHA - Occupational Exposure Limits Canada (Alberta) - Occupational Exposure Limits Local name Slica-Crystalline: Quartz OEL TWA 0.25 mg/m² (respirable particulate) Notations and remarks Carcinogenicity A2 Alberta Regulatory reference Alberta Regulatory reference Canada (Gritish Columbia) - Occupational Exposure Limits VEMP (OEL TWA) 0.1 mg/m² (respirable dust) Canada (Gritish Columbia) - Occupational Exposure Limits VEMP (OEL TWA) 0.025 mg/m² (respirable dust) Canada (Gritish Columbia) - Occupational Exposure Limits OEL TWA 0.025 mg/m² (respirable) Notations and remarks ACGIH Carcinogenicity category A2: IARC group 1 carcinogen OEL TWA 0.025 mg/m² (respirable) Notations and remarks ACGIH Carcinogenicity category A2: IARC group 1 carcinogen OEL TWA 0.025 mg/m² (respirable) Notations and remarks ACGIH Carcinogenicity category A2: IARC group 1 carcinogen OEL TWA 0.025 mg/m² (respirable) Notations and remarks ACGIH Occupational Exposure Limits OEL TWA 0.055 mg/m² (respirable particulate matter) Canada (Gritario - Occupational Exposure Limits OEL TWA 0.055 mg/m² (respirable particulate matter) TL/WB Basis: Pulm fibrosis; lung cancer. Notations: A2 (Suspected Human Carcinogen)	Canada (British Columbia) - Occupational Exposure	e Limits	
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Canada (Saskatchewan) - Occupational Exposure Limits OEL TWA	Canada (Ontario) - Occupational Exposure Limits		
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USA - ACGIH - Occupational Exposure Limits OSHA PEL TWA [1]	OEL TWA	5 mg/m³	
ACGIH OEL TWA USA - OSHA - Occupational Exposure Limits OSHA PEL TWA[1] 15 mg/m² (respirable fraction) USA - NIOSH - Occupational Exposure Limits NIOSH REL TWA S mg/m³ USA - MSHA - Occupational Exposure Limits MSHA PEL TWA 8/40 h S mg/m³ Cuartz (14808-60-7) Canada (Alberta) - Occupational Exposure Limits Notations and remarks Carcinogenicity A2 Regulatory reference Alberta Regulation 191/2021 Canada (Quebec) - Occupational Exposure Limits VEMP (OEL TWA) O.1 mg/m³ (respirable dust) Canada (British Columbia) - Occupational Exposure Limits VEMP (OEL TWA) O.1 mg/m³ (respirable dust) Canada (British Columbia) - Occupational Exposure Limits VEMP (OEL TWA) O.25 mg/m³ (respirable) Notations and remarks ACGIH Carcinogenicity category A2; IARC group 1 carcinogen Regulatory reference OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC) Canada (Ontario) - Occupational Exposure Limits OEL TWA O.1 mg/m³ (designated substances regulation-respirable fraction (Silica, crystalline) Canada (Saskatchewan) - Occupational Exposure Limits OEL TWA O.1 mg/m³ (designated substances regulation-respirable fraction (Silica, crystalline) Canada (Saskatchewan) - Occupational Exposure Limits OEL TWA O.05 mg/m² (Trydimite removed-respirable fraction (Silica - crystalline) Canada (Saskatchewan) - Occupational Exposure Limits OEL TWA O.05 mg/m² (Trydimite removed-respirable fraction (Silica - crystalline) Canada (Saskatchewan) - Occupational Exposure Limits OEL TWA O.05 mg/m² (Trydimite removed-respirable fraction (Silica - crystalline) Canada (Saskatchewan) - Occupational Exposure Limits OEL TWA O.05 mg/m² (Trydimite removed-respirable fraction (Silica - crystalline) T. Vivo Basis: Pulm fibrosis: Jung cancer. Notations: A2 (Suspected Human Carcinogen)	OEL STEL	10 mg/m³	
USA - OSHA - Occupational Exposure Limits OSHA PEL TWA [1]	USA - ACGIH - Occupational Exposure Limits		
OSHA PEL TWA [1] 15 mg/m³ (total dust) 5 mg/m³ (respirable fraction) USA - NIOSH - Occupational Exposure Limits NIOSH REL TWA 5 mg/m³ USA - MSHA - Occupational Exposure Limits MSHA PEL TWA 8/40 h 5 mg/m³ Quartz (14808-60-7) Canada (Alberta) - Occupational Exposure Limits Local name Silica-Crystalline: Quartz OEL TWA 0.025 mg/m³ (respirable particulate) Notations and remarks Carcinogenicity A2 Regulatory reference Alberta Regulation 191/2021 Canada (Quebec) - Occupational Exposure Limits USAM (OEL TWA) 0.1 mg/m³ (respirable dust) Canada (British Columbia) - Occupational Exposure Limits USAM (OEL TWA) 0.1 mg/m³ (respirable) Notations and remarks Silica, Crystalline - alpha quartz OEL TWA 0.025 mg/m² (respirable) Notations and remarks ACGIH Carcinogenicity category A2; IARC group 1 carcinogen OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC) Canada (Ontario) - Occupational Exposure Limits OEL TWA 0.1 mg/m² (designated substances regulation-respirable fraction (Silica, crystalline) Canada (Osakatchewan) - Occupational Exposure Limits OEL TWA 0.05 mg/m² (Trydimite removed-respirable fraction (Silica - crystalline) Canada (Saskatchewan) - Occupational Exposure Limits OEL TWA 0.05 mg/m² (Trydimite removed-respirable fraction (Silica - crystalline (Trydimite removed)) USA - ACGIH - Occupational Exposure Limits OCEL TWA 0.025 mg/m² (respirable particulate matter) Remark (ACGIH) TLV® Basis: Pulm fibrosis; lung cancer. Notations: A2 (Suspected Human Carcinogen)	ACGIH OEL TWA	5 mg/m³	
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Regulatory reference Alberta Regulation 191/2021 Canada (Quebec) - Occupational Exposure Limits VEMP (OEL TWA) 0.1 mg/m³ (respirable dust) Canada (British Columbia) - Occupational Exposure Limits Local name Silica, Crystalline - alpha quartz OEL TWA 0.025 mg/m³ (respirable) Notations and remarks ACGIH Carcinogenicity category A2; IARC group 1 carcinogen Regulatory reference OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC) Canada (Ontario) - Occupational Exposure Limits OEL TWA 0.1 mg/m³ (designated substances regulation-respirable fraction (Silica, crystalline) Canada (Saskatchewan) - Occupational Exposure Limits OEL TWA 0.05 mg/m³ (Trydimite removed-respirable fraction (Silica - crystalline (Trydimite removed)) USA - ACGIH - Occupational Exposure Limits Local name Silica crystalline - quartz ACGIH OEL TWA 0.025 mg/m³ (respirable particulate matter) Remark (ACGIH) TLV® Basis: Pulm fibrosis; lung cancer. Notations: A2 (Suspected Human Carcinogen)	OEL TWA	0.025 mg/m³ (respirable particulate)	
Canada (Quebec) - Occupational Exposure Limits VEMP (OEL TWA) 0.1 mg/m³ (respirable dust) Canada (British Columbia) - Occupational Exposure Limits Local name Silica, Crystalline - alpha quartz OEL TWA 0.025 mg/m³ (respirable) Notations and remarks ACGIH Carcinogenicity category A2; IARC group 1 carcinogen Regulatory reference OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC) Canada (Ontario) - Occupational Exposure Limits OEL TWA 0.1 mg/m³ (designated substances regulation-respirable fraction (Silica, crystalline) Canada (Saskatchewan) - Occupational Exposure Limits OEL TWA 0.05 mg/m³ (Trydimite removed-respirable fraction (Silica - crystalline (Trydimite removed)) USA - ACGIH - Occupational Exposure Limits Local name Silica crystaline - quartz ACGIH OEL TWA 0.025 mg/m³ (respirable particulate matter) Remark (ACGIH) TLV® Basis: Pulm fibrosis; lung cancer. Notations: A2 (Suspected Human Carcinogen)	Notations and remarks	Carcinogenicity A2	
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Canada (British Columbia) - Occupational Exposure Limits Local name Silica, Crystalline - alpha quartz OEL TWA 0.025 mg/m³ (respirable) Notations and remarks ACGIH Carcinogenicity category A2; IARC group 1 carcinogen Regulatory reference OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC) Canada (Ontario) - Occupational Exposure Limits OEL TWA 0.1 mg/m³ (designated substances regulation-respirable fraction (Silica, crystalline) Canada (Saskatchewan) - Occupational Exposure Limits OEL TWA 0.05 mg/m³ (Trydimite removed-respirable fraction (Silica - crystalline (Trydimite removed)) USA - ACGIH - Occupational Exposure Limits Local name Silica crystaline - quartz ACGIH OEL TWA 0.025 mg/m³ (respirable particulate matter) Remark (ACGIH) TLV® Basis: Pulm fibrosis; lung cancer. Notations: A2 (Suspected Human Carcinogen)	Canada (Quebec) - Occupational Exposure Limits		
Local name Silica, Crystalline - alpha quartz OEL TWA 0.025 mg/m³ (respirable) Notations and remarks ACGIH Carcinogenicity category A2; IARC group 1 carcinogen Regulatory reference OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC) Canada (Ontario) - Occupational Exposure Limits OEL TWA 0.1 mg/m³ (designated substances regulation-respirable fraction (Silica, crystalline) Canada (Saskatchewan) - Occupational Exposure Limits OEL TWA 0.05 mg/m³ (Trydimite removed-respirable fraction (Silica - crystalline (Trydimite removed)) USA - ACGIH - Occupational Exposure Limits Local name Silica crystaline - quartz ACGIH OEL TWA 0.025 mg/m³ (respirable particulate matter) Remark (ACGIH) TLV® Basis: Pulm fibrosis; lung cancer. Notations: A2 (Suspected Human Carcinogen)	VEMP (OEL TWA)	0.1 mg/m³ (respirable dust)	
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Regulatory reference OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC) Canada (Ontario) - Occupational Exposure Limits OEL TWA 0.1 mg/m³ (designated substances regulation-respirable fraction (Silica, crystalline) Canada (Saskatchewan) - Occupational Exposure Limits OEL TWA 0.05 mg/m³ (Trydimite removed-respirable fraction (Silica - crystalline (Trydimite removed)) USA - ACGIH - Occupational Exposure Limits Local name Silica crystaline - quartz ACGIH OEL TWA 0.025 mg/m³ (respirable particulate matter) Remark (ACGIH) TLV® Basis: Pulm fibrosis; lung cancer. Notations: A2 (Suspected Human Carcinogen)	OEL TWA	0.025 mg/m³ (respirable)	
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Local name Silica crystaline - quartz ACGIH OEL TWA 0.025 mg/m³ (respirable particulate matter) Remark (ACGIH) TLV® Basis: Pulm fibrosis; lung cancer. Notations: A2 (Suspected Human Carcinogen)	OEL TWA	0.05 mg/m³ (Trydimite removed-respirable fraction (Silica - crystalline (Trydimite removed))	
ACGIH OEL TWA 0.025 mg/m³ (respirable particulate matter) Remark (ACGIH) TLV® Basis: Pulm fibrosis; lung cancer. Notations: A2 (Suspected Human Carcinogen)	USA - ACGIH - Occupational Exposure Limits		
Remark (ACGIH) TLV® Basis: Pulm fibrosis; lung cancer. Notations: A2 (Suspected Human Carcinogen)	Local name	Silica crystaline - quartz	
	ACGIH OEL TWA	0.025 mg/m³ (respirable particulate matter)	
ACGIH chemical category Suspected Human Carcinogen	Remark (ACGIH)	TLV® Basis: Pulm fibrosis; lung cancer. Notations: A2 (Suspected Human Carcinogen)	
	ACGIH chemical category	Suspected Human Carcinogen	

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Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Quartz (14808-60-7)			
Regulatory reference	ACGIH 2022		
USA - OSHA - Occupational Exposure Limits			
Local name	Quartz (Total Dust) (Silica: Crystalline)		
OSHA PEL TWA [1]	50 μg/m³ (Respirable crystalline silica)		
Remark (OSHA)	Table Z-3. For OSHA PEL (TWA) use formula: (30 mg/m3 / (%SiO2+2)) for mg/m3. CAS No. source: eCFR Table Z-1.		
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-3 Mineral Dusts		
USA - IDLH - Occupational Exposure Limits	USA - IDLH - Occupational Exposure Limits		
IDLH	50 mg/m³ (respirable dust)		
USA - NIOSH - Occupational Exposure Limits			
NIOSH REL TWA	0.05 mg/m³ (respirable dust)		
USA - MSHA - Occupational Exposure Limits			
MSHA PEL TWA 8/40 h	30 mg/m³ / (%SiO2) + 2 mg/m³ (Total dust) 10 mg/m³ / (%SiO2) + 2 mg/m³ (Respirable dust)		

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station. Provide readily accessible eye wash stations and

safety showers.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Wear suitable gloves resistant to chemical penetration

Eye protection:

Wear eye/face protection

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Other information:

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Colour : Grayish White Odour : Earthy

Odour threshold : No data available pH : 12.45 at 25°C / 77 °F

Melting point : 2570 – 2625 °C (4658 - 4757 °F)

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Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

: No data available Freezing point 2850 °C / 5162 °F Boiling point Flash point Not applicable Relative evaporation rate (butylacetate=1) Not applicable Flammability Not applicable Vapour pressure Not applicable Relative vapour density at 20 °C / 68 °F Not applicable : 2.4 – 3.4 Relative density

Solubility : Water: 0.125 g/100ml at 20°C / 68 °F

Partition coefficient n-octanol/water : Not applicable : Not applicable Auto-ignition temperature Decomposition temperature : No data available Viscosity, kinematic : Not applicable Viscosity, dynamic No data available Explosive limits Not applicable Explosive properties No data available Oxidising properties No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts violently with: Strong acids. Reacts with water to form Calcium Hydroxide. The heat generated when mixed with water or moist air is sufficient to ignite surrounding materials such as paper, wood or cloth.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Incompatible materials.

10.5. Incompatible materials

Acids. Water, humidity. Fluoride compounds. Phosphorus pentoxide. Ethanol.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified.
Acute toxicity (dermal) : Not classified.
Acute toxicity (inhalation) : Not classified.

Calcium oxide	(1305-78-8)
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LD50 oral rat > 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure)

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Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Calcium oxide (1305-78-8)	
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity),
Eboo domaria.	Guideline: EU Method B.3 (Acute Toxicity (Dermal))
LD50 dermal rabbit	> 5000 mg/kg bodyweight Animal: rabbit, Guideline: other:US Federal Register 38: 187, Part 1500, Section 41, 1973.
LC50 inhalation rat	> 6.04 mg/l/4h
Magnesium oxide (MgO) (1309-48-4)	
LD50 oral rat	3870 mg/kg
ATE CA (oral)	3870 mg/kg bodyweight
Calcium hydroxide (1305-62-0)	
LD50 oral rat	7340 mg/kg
LD50 dermal rat	> 2500 mg/kg
LC50 inhalation rat	> 6.04 mg/l/4h
ATE CA (oral)	7340 mg/kg bodyweight
Skin corrosion/irritation :	Causes skin irritation.
Serious eye damage/irritation :	pH: 12.45 at 25°C / 77 °F Causes serious eye damage.
Serious eye damage/imation .	pH: 12.45 at 25°C / 77 °F
. ,	Not classified.
Germ cell mutagenicity :	Not classified.
Carcinogenicity :	May cause cancer if inhaled. Risk of cancer depends on duration and level of exposure.
Quartz (14808-60-7)	
IARC group	1 - Carcinogenic to humans
National Toxicology Program (NTP) Status	Known Human Carcinogens
In OSHA Hazard Communication Carcinogen list	Yes
Reproductive toxicity :	Not classified.
	May cause respiratory irritation.
Calcium oxide (1305-78-8)	
STOT-single exposure	May cause respiratory irritation.
Calcium hydroxide (1305-62-0)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure :	Causes damage to organs through prolonged or repeated exposure.
Limestone (1317-65-3)	
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.
Calcium oxide (1305-78-8)	
LOAEL (oral, rat, 90 days)	300 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	0.413 mg/l air Animal: rat, Animal sex: male, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study)

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Quartz (14808-60-7)	
, , , , , , , , , , , , , , , , , , ,	
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified.
High Calcium Lime Kiln Dust	
Viscosity, kinematic	Not applicable
Symptoms/effects after inhalation	: May cause irritation to the respiratory tract.
Symptoms/effects after skin contact	: Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin. May cause burns in the presence of moisture. Skin contact during hydration may slowly develop sufficient heat that may cause severe burns possibly resulting in permanent injury. Do not allow product to harden around any body part or allow continuous, prolonged contact with skin. Handling can cause dry skin.
Symptoms/effects 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/effects after ingestion	: May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Chronic symptoms	: May cause cancer. Causes damage to organs through prolonged or repeated exposure.
Other information	: Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : No known significant effects or critical hazards.

Calcium oxide (1305-78-8)	
LC50 - Fish [1]	1070 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [static])
EC50 - Crustacea [1]	49.1 mg/l Test organisms (species): Daphnia magna
NOEC (chronic)	32 mg/l Test organisms (species): Crangon septemspinosa Duration: '14 d'
NOEC chronic fish	100 mg/l Test organisms (species): other:Tilapia nilotica Duration: '46 d'

12.2. Persistence and degradability

High Calcium Lime Kiln Dust	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

High Calcium Lime Kiln Dust		
Partition coefficient n-octanol/water	Not applicable	
Bioaccumulative potential	Not established.	
Calcium oxide (1305-78-8)		
BCF - Fish [1]	(no bioaccumulation)	
Calcium hydroxide (1305-62-0)		
BCF - Fish [1]	(no bioaccumulation)	

12.4. Mobility in soil

No additional information available

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12.5. Other adverse effects

Other information : No other effects known.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations

: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

14.1. UN number

DOT NA NO : Not applicable UN-No. (TDG) : Not applicable UN-No. (IMDG) : Not applicable UN-No. (IATA) : 1910

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Not applicable
Proper Shipping Name (TDG) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Calcium oxide

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : Not applicable

TDG

Transport hazard class(es) (TDG) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : 8
Danger labels (IATA) : 8



14.4. Packing group

Packing group (DOT): Not applicablePacking group (TDG): Not applicablePacking group (IMDG): Not applicable

Packing group (IATA) : III

14.5. Environmental hazards

Other information : No supplementary information available.

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Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

14.6. Special precautions for user

Special transport precautions

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

DOT

No data available

TDG

No data available

IMDG

No data available

IATA

No data available

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

Not applicable

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.

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories.

15.2. International regulations

No additional information available

15.3. US State regulations



This product can expose you to Silica, respirable crystalline, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Component	State or local regulations
Limestone(1317-65-3)	U.S New Jersey - Right to Know Hazardous Substance List; U.S Pennsylvania - RTK (Right to Know) List; U.S Massachusetts - Right To Know List
Calcium oxide(1305-78-8)	U.S New Jersey - Right to Know Hazardous Substance List; U.S Pennsylvania - RTK (Right to Know) List; U.S Massachusetts - Right To Know List
Magnesium oxide (MgO)(1309-48-4)	U.S New Jersey - Right to Know Hazardous Substance List; U.S Pennsylvania - RTK (Right to Know) List; U.S Massachusetts - Right To Know List
Calcium hydroxide(1305-62-0)	U.S New Jersey - Right to Know Hazardous Substance List; U.S Pennsylvania - RTK (Right to Know) List; U.S Massachusetts - Right To Know List
Quartz(14808-60-7)	U.S New Jersey - Right to Know Hazardous Substance List; U.S Pennsylvania - RTK (Right to Know) List; U.S Massachusetts - Right To Know List

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SECTION 16: Other information

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Revision date : 10/18/2022 Other information : None.

Prepared by : Nexreg Compliance Inc.

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Full text of H-statements	
Carc. 1A	Carcinogenicity, Category 1A
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 1	Specific target organ toxicity – Repeated exposure, Category 1
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

SDS HazCom 2012 - WHMIS 2015 (Nexreg) - Section 15 2021

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