

SAFETY DATA SHEET

Section 1. Identification

GHS product identifier : Hydrated Lime

Other means of identification : Snowbright Hydrate, Hydrated Lime, Slaked Lime, Calcium Hydroxide Ca(OH)_2

Identified uses : Water and wastewater treatment, Asphalt concrete treatment for anti-strip purposes, pH adjustment

Supplier's details : Pete Lien & Sons, Inc.
 PO Box 440
 Rapid City, SD 57702

Emergency telephone number (hours of operation) : (605) 342-7224 (Monday-Friday 8am-5pm)

Section 2. Hazards identification

Classification of the substance or mixture : SKIN IRRITATION - Category 2
 EYE DAMAGE - Category 1
 SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE [Respiratory System] - Category 3
 CARCINOGEN - Category 1

GHS label elements



Hazard pictograms :

Signal word : Danger

Hazard statements : Causes skin irritation. Causes serious eye damage. May cause cancer through inhalation. May cause respiratory irritation.

Precautionary statements

Prevention : Wear protective gloves and eye protection. Wash exposed skin thoroughly after handling. Avoid breathing dust. Use only outdoors or in a well-ventilated area. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Response : IF ON SKIN: Wash exposed skin with plenty of water. If skin irritation occurs: get medical attention. Take off contaminated clothing and wash it before reuse.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek immediate medical attention.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Seek medical attention if you feel unwell

If exposed or concerned: Get medical advice

Storage : Store to minimize dust generation

Disposal : Dispose of contents or containers in accordance with applicable regulations.

Hazards not otherwise classified :

Ingredients with unknown toxicity : Not Applicable

Section 3. Composition/information on ingredients

Substance/mixture : Calcium Hydroxide (Ca(OH)₂)

CAS number/other identifiers

Component	CAS #	% by weight
Calcium Hydroxide	1305-62-0	>89
Crystalline Silica	14808-60-7	.0001-1

Impurities : Small quantities of calcium carbonate, calcium oxide and impurities. Impurities will vary from source to source.

Section 4. First aid measures

Description of necessary first aid measures

Eye Contact : Contact can cause severe irritation or burning of eyes, including permanent damage. Immediately flush eyes with generous amounts of water for at least 15 minutes. Pull back the eyelid to ensure that all hydrated lime dust has been washed out. Seek medical attention immediately. Do not rub eyes.

Skin Contact : Contact can cause severe irritation or burning of skin. Wash exposed area with large amounts of water. Seek medical attention immediately.

Ingestion : Do not induce vomiting. Seek medical attention immediately.

Inhalation : This product can cause severe irritation of the respiratory system. Move victim to fresh air. Seek medical attention if necessary. If breathing has stopped, give artificial respiration.

Most important symptoms/effects, acute and delayed : Irritation of skin, eyes, gastrointestinal tract or respiratory tract. Long-term exposure by inhalation may cause permanent damage. This product contains crystalline silica, which has been classified by IARC as (Group I) carcinogenic to humans when inhaled. Inhalation of silica can also cause a chronic lung disorder, silicosis.

Indication of immediate medical attention and special treatment needed, if necessary: See first aid information above. Note to Physicians: Provide general supportive measures and treat symptomatically.

Section 5. Fire-fighting measures

Extinguishing Media : Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

Unsuitable Extinguishing Media: None known.

Fire Hazards :Hydrated lime is not combustible or flammable. Hydrated lime is not considered to be an explosion hazard.

Hazardous Combustion Products: None know

Special Protective Equipment and Fire Fighting Instructions:

No Special measures are required. Fire-fighters should wear appropriate protective equipment and self-contained apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Spill/Leak Procedures : Use proper protective equipment.

Small Spills :Use dry methods to collect spilled materials. Avoid generating dust. Do not clean up with compressed air. Residue on surfaces may be water washed.

Large Spills :Use dry methods to collect spilled materials. Evacuate area downwind of clean-up operations to minimize dust exposure.

Methods and materials for containment and cleaning up

Containment : For large spills, as much as possible, avoid the generation of dusts. Prevent release to sewers or waterways.

Cleanup : Residual amounts of material can be flushed with large amounts of water. Equipment can be washed with either mild vinegar and water solution, or detergent and water.

Section 7. Handling and storage

Precautions for safe handling

Avoid direct skin contact with the material.

Wear personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not ingest.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry, and well-ventilated location. Do not store near incompatible materials (see Section 10 below).

Long-term storage in aluminum containers is not recommended, as calcium oxide may corrode aluminum over long periods of time.

Section 8. Exposure controls/personal protection

Exposure limits

Component	CAS #	Exposure limits
Calcium Hydroxide	1305-62-0	OSHA PEL: 5mg/m ³ ACGIH TLV: 5mg/m ³

Magnesium Oxide	1309-48-4	OSHA PEL: 15mg/m ³ ACGIH TLV: 10mg/m ³
Crystalline Silica	14808-60-7	OSHA PEL: 10mg/m ³ divided by (the percentage of silica in the dust plus 2) (respirable) ACGIH TLV: 0.025 mg/m ³

Engineering controls : Provide ventilation adequate to maintain PELs.

Individual Protection Measures

Respiratory Protection :Use NIOSH/MSHA approved respirators if airborne concentration exceeds PEL.

Skin Protection :Use appropriate gloves to prevent skin contact. When there is a risk of skin contact, wear suitable clothing to prevent such contact.

Eye Protection : Use safety glasses with side shields or safety goggles. Contact lenses should not be worn when working with lime products.

Other : Eye wash fountain and emergency showers are recommended

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Occupational exposure limits		TWA (8 hours)			STEL (15 min)			Ceiling			
Ingredient	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	Notations
Calcium dihydroxide	US ACGIH 4/2014	-	5	-	-	-	-	-	-	-	
	AB 4/2009	-	5	-	-	-	-	-	-	-	[3]
	BC 7/2013	-	5	-	-	-	-	-	-	-	
	ON 1/2013	-	5	-	-	-	-	-	-	-	
	QC 1/2014	-	5	-	-	-	-	-	-	-	
Crystalline silica, quartz	US ACGIH 4/2014	-	0.025	-	-	-	-	-	-	-	[a]
	AB 4/2009	-	0.025	-	-	-	-	-	-	-	[b]
	BC 7/2013	-	0.025	-	-	-	-	-	-	-	[c]
	ON 1/2013	-	0.1	-	-	-	-	-	-	-	[a]
	QC 1/2014	-	0.1	-	-	-	-	-	-	-	[d]

[3]Skin sensitization

Form: [a]Respirable fraction [b]Respirable particulate. [c]Respirable [d]Respirable dust

Section 9. Physical and chemical properties

Physical State	: Solid	
Appearance	: White or grayish-white material	
Odor	: Sweet, soil like	
Odor threshold	: Not applicable	
pH at 25 degrees C	: 12.45	Melting point : 1076°F, 580°C
Initial boiling point	: 5162°F, 2850°C	
Flash point	: Not applicable	
Evaporation rate	: No information available	
Flammability (solid, gas)	: Not applicable.	
Lower and upper explosive	: Not applicable.	

(flammable) limits	
Vapor pressure	: Not applicable.
Vapor density	: Not applicable.
Relative density	: 2.446
Solubility in water	: No Data Available
Partition coefficient: n octanol/water	: No Data Available
Auto-ignition temperature	: Not applicable.
Decomposition temperature	: No information available
Viscosity	: No information available

Section 10. Stability and reactivity

Reactivity	: None known. See also Incompatibility below
Chemical stability	: Hydrated lime is chemically stable
Possibility of hazardous reactions	: See above
Conditions to avoid	: Avoid dust formation, incompatible products, excess heat, and exposure to air or moisture over prolonged periods
Incompatible materials	: Hydrated lime should not be mixed or stored with the following materials: ACIDS REACTIVE FLUORIDATED COMPOUNDS REACTIVE BROMINATED COMPOUNDS REACTIVE POWDERED METALS ALUMINUM POWDER ORGANIC ACID ANHYDRIDES NITRO-ORGANIC COMPOUNDS REACTIVE PHOPHOROUS COMPOUNDS INTERHALOGENATED COMPOUNDS
Hazardous decomposition products	: Calcium Oxides

Section 11. Toxicological Information

Information on the likely routes of exposure: See First Aid discussion above.

Symptoms related to the physical, chemical and toxicological characteristics: See First Aid discussion above.

Delayed and immediate effects and also chronic effects from exposure: See First Aid discussion above.

Numerical measures of toxicity: No LD50/LC50 have been identified for this product's components.

Carcinogen listing: Hydrated lime is not listed by MSHA, OSHA, or IARC as a carcinogen, but this product contains crystalline silica, which has been classified by IARC as (Group I) carcinogenic to humans when inhaled

Section 12. Ecological information

- Ecotoxicity** : Because of the high pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems in high concentrations.
- Persistence and degradability** : There is no data available.
- Bioaccumulative potential** : This material shows no bioaccumulation effects of food chain concentration toxicity.
- Mobility in soil** : There is no data available.
- Other adverse effects** : This material is alkaline and if released into water or moist soil will cause an increase in pH.

Section 13. Disposal considerations

Dispose of in accordance with all applicable federal, state, and local environmental regulations. If this product as supplied, and unmixed, becomes a waste. It will not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act.

Section 14. Transport information

- UN number** : 30111604
- UN proper shipping name** : Hydrated Lime
- 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 73/78 and the IBC Code** : Not available.

Special Precautions which a user needs to be aware of , or needs to comply with, in connection with transport or conveyance either within or outside their premises: When being transported by air, hydrated lime is classified in the Department of Transportation (DOT) regulations as a hazardous material. (49 CFR 172.101). For aircraft transport only, Calcium hydroxide 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 100kg. For quantities greater than 25kg up to and including 100kg, 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, hydrated lime 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 hydrated lime product for air transport. Hydrated lime is not classified as a hazardous material by DOT when transported by means other than air.

Section 15. Regulatory information

EPA Regulations:

RCRA Hazardous Waste Number: not listed (40 CFR 261.33)

RCRA Hazardous Waste Classification (40 CFR 261): not classified

CERCLA Hazardous Substance (40 CFR 302.4) unlisted specific per RCRA, Sec. 3001; CWA, Sec. 311 (b)(4); CWA, Sec. 307(a), CAA, Sec. 112

CERCLA Reportable Quantity: not listed.

SARA 311/312 Codes: not listed.

SARA Toxic Chemical (40 CFR 372.65): not listed.

SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Not listed, Threshold Planning Quantity (TPQ): not listed

OSHA/MSHA Regulations:

Air Containment (29 CFR 1910.1000, Table Z-1, Z-1-A): 5 mg/M³ TWA-8

MSHA: not listed

OSHA Specifically Regulated Substance (29 CFR 1910) not listed

State Regulations:

Consult state and local authorities for guidance

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Canadian lists

Canadian NPRI	:None of the components are listed
CEPA Toxic Substances	:None of the components are listed
Canada Inventory	:All components are listed or exempted

Section 16. Other information

History

Date of issue (mm/dd/yyyy) : 06/01/2015

Version : 1

Disclaimer: The information contained in this document applies to this specific material as supplied. Pete Lien & Sons, Inc. believes that the information contained in this SDS is accurate. The suggested precautions and recommendations are based on recognized good work practices and experience as of the date of publication. They are not necessarily all-inclusive or fully adequate in every circumstance as not all use circumstances can be anticipated. The suggestions should not be confused with nor followed in violation of applicable laws, regulation, rules or insurance requirement.

It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for one's own particular use. Since the actual use of the product described herein is beyond our control, Pete Lien & Sons, Inc. , assumes no liability arising out of the use of the product by others. Appropriate warnings and safe handling procedures should be provided to handlers and users. Product must not be used in a manner which could result in harm.