

SAFETY DATA SHEET

1. Identification

Product identifier	Mississippi Lime Pebble and Granular Quicklime - Ste. Genevieve Facility
Other means of identification	
CAS number	1305-78-8
Recommended use	Industrial uses
Recommended restrictions	Not for use as direct food or pharma ingredients.
Manufacturer/Importer/Supplier/Distributor information	
Manufacturer:	Mississippi Lime Company
Address:	16147 US Highway 61 Ste Genevieve, MO 63670 (800) 437-5463
24 Hour Emergency Contact Number:	

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 1C
	Serious eye damage/eye irritation	Category 1
	Carcinogenicity	Category 1A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 3
OSHA defined hazards	Not classified.	
Label elements		



Signal word	Danger
Hazard statement	Causes severe skin burns and eye damage. May cause respiratory irritation. May cause cancer. Harmful to aquatic life.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment.
Response	If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. 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/doctor. Wash contaminated clothing before reuse.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
Calcium oxide (CaO)		1305-78-8	97 - 99

Impurities

Chemical name	CAS number	%
Magnesium Oxide	1309-48-4	≤ 1
Silicon Oxide	7631-86-9	≤ 1
Quartz	14808-60-7	≤ 0.5

Composition comments All concentrations are in percent by weight.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	Do not use water as an extinguisher. The product reacts with water and will generate heat.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Use water spray to cool unopened containers. Move containers from fire area if you can do it without risk. In case of fire and/or explosion do not breathe fumes.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	The product is nonflammable and does not support combustion.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe dust. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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Methods and materials for containment and cleaning up

Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Collect dust using a vacuum cleaner equipped with HEPA filter. This product is miscible in water. Prevent product from entering drains. Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Absorb in vermiculite, dry sand or earth and place into containers. Shovel the material into waste container. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Environmental precautions

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage**Precautions for safe handling**

Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in original tightly closed container. Store in a well-ventilated place. Avoid contact with acids, water, and moisture. Protect from humidity. The substance is hygroscopic and will absorb water by contact with the moisture in the air. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection**Occupational exposure limits****US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Material	Type	Value
Calcium oxide (CaO) (CAS 1305-78-8)	PEL	5 mg/m ³

Impurities	Type	Value	Form
Magnesium Oxide (CAS 1309-48-4)	PEL	15 mg/m ³	Total particulate.
Quartz (CAS 14808-60-7)	PEL	0.05 mg/m ³	Respirable dust.

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

Impurities	Type	Value	Form
Magnesium Oxide (CAS 1309-48-4)	TWA	5 mg/m ³	Respirable fraction.
		15 mg/m ³	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
Silicon Oxide (CAS 7631-86-9)	TWA	0.8 mg/m ³	
		20 mppcf	
Quartz (CAS 14808-60-7)	TWA	0.1 mg/m ³	Respirable.
		2.4 mppcf	Respirable.

US. ACGIH Threshold Limit Values

Material	Type	Value
Calcium oxide (CaO) (CAS 1305-78-8)	TWA	2 mg/m ³

Impurities	Type	Value	Form
Magnesium Oxide (CAS 1309-48-4)	TWA	10 mg/m ³	Inhalable fraction.
Quartz (CAS 14808-60-7)	TWA	0.025 mg/m ³	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Material	Type	Value	
Calcium oxide (CaO) (CAS 1305-78-8)	TWA	2 mg/m3	
Impurities	Type	Value	Form
Silicon Oxide (CAS 7631-86-9)	TWA	6 mg/m3	
Quartz (CAS 14808-60-7)	TWA	0.05 mg/m3	Respirable dust.

Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Good general ventilation 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. If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn. Eye wash facilities and emergency shower must be available when handling this product.
Individual protection measures, such as personal protective equipment	
Eye/face protection	When working with powders or dusts, wear dust-proof chemical goggles and face shield unless full facepiece respiratory protection is worn.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
Skin protection	
Other	Wear appropriate chemical resistant clothing. Apron with long sleeves or two piece chemical protective clothing, and rubber boots are recommended.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Wear NIOSH approved respirator appropriate for airborne exposure at the point of use.
Thermal hazards	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	Powder.
Color	Light grey to white.

Odor Odorless.

Odor threshold Not available.

pH > 12.4 Saturated solution in water

Melting point/freezing point 4661.6 °F (2572 °C)

Initial boiling point and boiling range 5162 °F (2850 °C)

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Non flammable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Vapor density Not available.

Relative density Not available.

Solubility(ies)	
Solubility (water)	Reacts to form calcium hydroxide.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Molecular formula	Ca-O
Molecular weight	56.08 g/mol
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable under the prescribed storage conditions.
Possibility of hazardous reactions	Strong exothermic reaction with acids. Calcium oxide reacts exothermically with water to form calcium hydroxide. The heat generated by this reaction may ignite combustible materials.
Conditions to avoid	Contact with incompatible materials. The substance is hygroscopic and will absorb water by contact with the moisture in the air.
Incompatible materials	Acids. Water, moisture. Humid air. Hydrogen fluoride. Phosphorus pentoxide. Boric oxide. Steam. Many organic materials.
Hazardous decomposition products	Contact with water: Calcium hydroxide.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns.

Symptoms related to the physical, chemical and toxicological characteristics Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.

Information on toxicological effects

Acute toxicity Not expected to be acutely toxic.

Toxicological data

Impurities	Species	Test Results
Silicon Oxide (CAS 7631-86-9)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 5000 mg/kg, 24 Hours
Inhalation		
<i>Dust</i>		
LC50	Rat	> 0.14 mg/l, 4 Hours
Oral		
LD50	Rat	> 3300 mg/kg

Skin corrosion/irritation Causes severe skin burns.

Serious eye damage/eye irritation Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity May cause cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Quartz (CAS 14808-60-7) 1 Carcinogenic to humans.
Silicon Oxide (CAS 7631-86-9) 3 Not classifiable as to carcinogenicity to humans.

NTP Report on Carcinogens

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

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Quartz (CAS 14808-60-7) Cancer

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure May cause respiratory irritation.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Harmful to aquatic life.

Persistence and degradability The product solely consists of inorganic compounds which are not biodegradable.

Bioaccumulative potential No data available on bioaccumulation.

Mobility in soil No data available for this product.

Other adverse effects The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

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 containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number UN1910
UN proper shipping name Calcium oxide
Transport hazard class(es)

Class 8
Subsidiary risk -
Label(s) 8

Packing group III

Special precautions for user Symbol A – Airfreight Regulated. This material is not subject to HMR when transported by ground. Read safety instructions, SDS and emergency procedures before handling.

Special provisions IB8, IP3, T1, TP33
Packaging exceptions 154
Packaging non bulk 213
Packaging bulk 240

IATA

UN number UN1910

UN proper shipping name Calcium oxide
Transport hazard class(es)
Class 8
Subsidiary risk -
Packing group III
Environmental hazards No.
ERG Code 8L
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number UN1910
UN proper shipping name CALCIUM OXIDE
Transport hazard class(es)
Class 8
Subsidiary risk -
Packing group Not available.
Environmental hazards
Marine pollutant No.
EmS Not available.
Special precautions for user Not subject to the provisions of this Code but may be subject to provisions governing the transport of dangerous goods by other modes. SP 960. Read safety instructions, SDS and emergency procedures before handling.

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.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Quartz (CAS 14808-60-7)	Cancer lung effects immune system effects kidney effects
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Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

Classified hazard categories Skin corrosion or irritation
 Serious eye damage or eye irritation
 Carcinogenicity
 Specific target organ toxicity (single or repeated exposure)

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) Contains component(s) regulated under the Safe Drinking Water Act.

US state regulations

US. Massachusetts RTK - Substance List

Calcium oxide (CaO) (CAS 1305-78-8)
Magnesium Oxide (CAS 1309-48-4)
Quartz (CAS 14808-60-7)
Silicon Oxide (CAS 7631-86-9)

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

Calcium oxide (CaO) (CAS 1305-78-8)
Magnesium Oxide (CAS 1309-48-4)
Quartz (CAS 14808-60-7)
Silicon Oxide (CAS 7631-86-9)

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

Calcium oxide (CaO) (CAS 1305-78-8)
Magnesium Oxide (CAS 1309-48-4)
Quartz (CAS 14808-60-7)
Silicon Oxide (CAS 7631-86-9)

US. Rhode Island RTK

Calcium oxide (CaO) (CAS 1305-78-8)
Magnesium Oxide (CAS 1309-48-4)
Quartz (CAS 14808-60-7)

California Proposition 65



WARNING: This product can expose you to SILICA, CRYSTALLINE QUARTZ, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

Quartz (CAS 14808-60-7)

Listed: October 1, 1988

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Magnesium Oxide (CAS 1309-48-4)
Quartz (CAS 14808-60-7)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
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	26-June-2018
Revision date	10-April-2019
Version #	03
HMIS® ratings	Health: 3* Flammability: 0 Physical hazard: 0

Disclaimer

Mississippi Lime Company cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.