SAFETY DATA SHEET

1. Identification

Product identifier **MLC™ Quicklime - Calera**

Other means of identification

Product code Lime, Quicklime - Various Gradations, Granular Quicklime, Calcium Oxide

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 d/b/a MLC

Address: 16147 US Highway 61
Ste Genevieve, MO 63670

Phone Number: (800) 437-5463

24 Hour Emergency Contact Number: (866) 519-4752

Access code: 336393

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. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

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	92 - 99

Impurities

Chemical name	Common name and synonyms	CAS number	%
Magnesium Oxide		1309-48-4	< 5
Silicon Oxide		7631-86-9	< 3
Quartz		14808-60-7	< 1

Composition comments Occupational Exposure Limits for impurities are listed in Section 8. 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.

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. Prevent product from entering drains. Stop the flow of material, if this is without risk. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not get water inside containers. Prevent entry into waterways, sewer, basements or confined areas.

Small Spills: Cover with DRY earth, DRY sand, or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain. Collect spill using a vacuum cleaner with a HEPA filter. Put material in suitable, covered, labeled containers.

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

Environmental precautions

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

U.S. - OSHA

Impurities	Type	Value
Silicon Oxide (CAS 7631-86-9)	TWA	80 mg/m3

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

Material	Type	Value
Calcium oxide (CaO) (CAS 1305-78-8)	PEL	5 mg/m3

Impurities	Type	Value	Form
Magnesium Oxide (CAS 1309-48-4)	PEL	15 mg/m3	Total particulate.
Quartz (CAS 14808-60-7)	PEL	0.05 mg/m3	Respirable dust.

US. OSHA Table Z-3 Permissible Exposure Limits (PEL) for Mineral Dusts (29 CFR 1910.1000)

Impurities	Type	Value	Form
Magnesium Oxide (CAS 1309-48-4)	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
Silicon Oxide (CAS 7631-86-9)	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		20 mppcf	
Quartz (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable.
		2.4 mppcf	Respirable.

US. ACGIH Threshold Limit Values (TLV)

Material	Type	Value
Calcium oxide (CaO) (CAS 1305-78-8)	TWA	2 mg/m3

US. ACGIH Threshold Limit Values (TLV)

Impurities	Type	Value	Form
Magnesium Oxide (CAS 1309-48-4)	TWA	10 mg/m3	Inhalable fraction.
Quartz (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.

NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended

Material	Type	Value
Calcium oxide (CaO) (CAS 1305-78-8)	IDLH	25 mg/m3

Impurities	Type	Value
Magnesium Oxide (CAS 1309-48-4)	IDLH	750 mg/m3
Silicon Oxide (CAS 7631-86-9)	IDLH	3000 mg/m3
Quartz (CAS 14808-60-7)	IDLH	50 mg/m3

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. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134.

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	12.45 in Aqueous Solution (@ 25 °C)
pH temperature	77 °F (25 °C)
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	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	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	
Density	3.34 g/cm3
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	Dust may irritate 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)		
Acute		
Dermal		
LD50	Rabbit	> 5000 mg/kg, 24 Hours
Inhalation		
Dust		
LC50	Rat	> 0.14 mg/l, 4 Hours
Oral		
LD50	Rat	> 3300 mg/kg

Skin corrosion/irritation Causes severe skin burns and eye damage.

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.

In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003) According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits.

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 No data is available on the degradability of this substance.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. 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 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 hazard	-
Label(s)	8
Packing group	III
Environmental hazards	
Marine pollutant	No.
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 hazard	-
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 hazard	-
Packing group	-
Environmental hazards	
Marine pollutant	No.
EmS	Not assigned.
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

Toxic Substances Control Act (TSCA) This substance is on the TSCA 8(b) inventory and is designated “active”.

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) Not regulated.

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)

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)
Silicon Oxide (CAS 7631-86-9)

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

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	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 that all components of this product comply 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 22-August-2024

Revision date -

Version # 01

HMIS® ratings Health: 3*
Flammability: 0
Physical hazard: 1

NFPA ratings

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.