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
- 24 Hour Emergency Contact Number: (800) 437-5463

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
### Impurities

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium Oxide</td>
<td>1309-48-4</td>
<td>≤ 1</td>
</tr>
<tr>
<td>Silicon Oxide</td>
<td>7631-86-9</td>
<td>≤ 1</td>
</tr>
<tr>
<td>Quartz</td>
<td>14808-60-7</td>
<td>≤ 0.5</td>
</tr>
</tbody>
</table>

### 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.
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.

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

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

<table>
<thead>
<tr>
<th>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Material</td>
</tr>
<tr>
<td>PEL</td>
<td>Calcium oxide (CaO) (CAS 1305-78-8)</td>
</tr>
<tr>
<td>PEL</td>
<td>Magnesium Oxide (CAS 1309-48-4)</td>
</tr>
<tr>
<td>PEL</td>
<td>Quartz (CAS 14808-60-7)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. OSHA Table Z-3 (29 CFR 1910.1000)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Impurities</td>
</tr>
<tr>
<td>TWA</td>
<td>Magnesium Oxide (CAS 1309-48-4)</td>
</tr>
<tr>
<td>TWA</td>
<td>Silicon Oxide (CAS 7631-86-9)</td>
</tr>
<tr>
<td>TWA</td>
<td>Quartz (CAS 14808-60-7)</td>
</tr>
<tr>
<td>15 mg/m3 Total dust.</td>
<td>15 mppcf Respirable fraction.</td>
</tr>
<tr>
<td>50 mppcf Total dust.</td>
<td>20 mppcf</td>
</tr>
<tr>
<td>15 mppcf Respirable fraction.</td>
<td>2.4 mppcf</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. ACGIH Threshold Limit Values</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Material</td>
</tr>
<tr>
<td>TWA</td>
<td>Calcium oxide (CaO) (CAS 1305-78-8)</td>
</tr>
<tr>
<td>TWA</td>
<td>Magnesium Oxide (CAS 1309-48-4)</td>
</tr>
<tr>
<td>TWA</td>
<td>Quartz (CAS 14808-60-7)</td>
</tr>
</tbody>
</table>
### Table 1: Biological limit values and appropriate engineering controls

<table>
<thead>
<tr>
<th>Material</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium oxide (CaO) (CAS 1305-78-8)</td>
<td>TWA</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>Silicon Oxide (CAS 7631-86-9)</td>
<td>TWA</td>
<td>6 mg/m³</td>
</tr>
<tr>
<td>Quartz (CAS 14808-60-7)</td>
<td>TWA</td>
<td>0.05 mg/m³</td>
</tr>
</tbody>
</table>

**Impurities**

<table>
<thead>
<tr>
<th>Material</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>silicon oxide (CAS 7631-86-9)</td>
<td>TWA</td>
<td>6 mg/m³</td>
<td>respirable dust.</td>
</tr>
</tbody>
</table>

#### 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.

- **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 Not available.
(n-octanol/water)

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.


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

<table>
<thead>
<tr>
<th>Impurities</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon Oxide (CAS 7631-86-9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rabbit</td>
<td>&gt; 5000 mg/kg, 24 Hours</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dust</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Rat</td>
<td>&gt; 0.14 mg/l, 4 Hours</td>
</tr>
<tr>
<td><strong>Oral</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>&gt; 3300 mg/kg</td>
</tr>
<tr>
<td><strong>Skin corrosion/irritation</strong></td>
<td></td>
<td>Causes severe skin burns.</td>
</tr>
<tr>
<td><strong>Serious eye damage/eye irritation</strong></td>
<td></td>
<td>Causes serious eye damage.</td>
</tr>
</tbody>
</table>

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
Calcium oxide

UN proper shipping name

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 CALCIA OXIDE

Transport hazard class(es)

Class 8

Subsidiary risk -

Packing group Not available.

Environmental hazards No.

Marine pollutant Not available.

EmS 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.

Special precautions for user Not applicable.

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

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)

All components of the mixture on the TSCA 8(b) inventory are 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.
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**

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Taiwan</td>
<td>Taiwan Chemical Substance Inventory (TCSI)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*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** 06-September-2019

**Version #** 04
HMIS® ratings

Health: 3*
Flammability: 0
Physical hazard: 1

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.