SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Product name : Limestone Flour
Product code : Not available

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture : Agriculture and Construction use.

1.3. Details of the supplier of the safety data sheet
Ash Grove Cement Company
11011 Cody
Overland Park, KS 66210
T 913-451-8900

1.4. Emergency telephone number
Emergency number : CHEMTREC (800) 424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
GHS-US classification
Carcinogenicity 1A

2.2. Label elements
GHS-US labelling
Hazard pictograms (GHS-US)

Signal word (GHS-US) : Danger
Hazard statements (GHS-US) : May cause cancer.
Prevention statements (GHS-US) : Do not handle until all safety precautions have been read and understood. Wear protective gloves and clothing as well as eye and face protection. Do not breathe dust. Use the proper respirator, when necessary, to avoid injury.
Response statements (GHS-US) : If exposed or concerned: Get medical attention.
Storage statements (GHS-US) : Store locked up.
Disposal statements (GHS-US) : Dispose of contents and container in accordance with all local, state and federal regulations.

2.3. Other hazards
Other hazards not contributing to the classification : Not applicable.

2.4. Unknown acute toxicity (GHS-US)
1% of the mixture consists of ingredient(s) of unknown acute toxicity.

SECTION 3: Composition/information on ingredients

3.1. Substance
Not applicable.

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone</td>
<td>(CAS No) 1317-65-3</td>
<td>60 - 100</td>
<td>Not classified</td>
</tr>
<tr>
<td>Magnesium carbonate</td>
<td>(CAS No) 546-93-0</td>
<td>≤35</td>
<td>Not classified</td>
</tr>
<tr>
<td>Silica, amorphous</td>
<td>(CAS No) 7631-86-9</td>
<td>0.5 - 3</td>
<td>Not classified</td>
</tr>
<tr>
<td>Iron oxide (Fe2O3)</td>
<td>(CAS No) 1309-37-1</td>
<td>0.1 - 1</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aluminum oxide</td>
<td>(CAS No) 1344-28-1</td>
<td>0.1 - 1</td>
<td>Not classified</td>
</tr>
<tr>
<td>Sulfur</td>
<td>(CAS No) 7704-34-9</td>
<td>≤0.5</td>
<td>Skin Irrit. 2, H315</td>
</tr>
</tbody>
</table>
Limestone Flour
Safety Data Sheet

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz</td>
<td>(CAS No) 14808-60-7</td>
<td>≤0.3</td>
<td>Acute Tox. 4 (Oral), H302 Carc. 1A, H350 STOT RE 1, H372</td>
</tr>
<tr>
<td>Sodium oxide (Na2O)</td>
<td>(CAS No) 1313-59-3</td>
<td>≤0.2</td>
<td>Skin Corr. 1B, H314</td>
</tr>
<tr>
<td>Potassium oxide</td>
<td>(CAS No) 12136-45-7</td>
<td>≤0.1</td>
<td>Not classified</td>
</tr>
<tr>
<td>Manganese(III) oxide</td>
<td>(CAS No) 39432-47-8</td>
<td>&lt;0.1</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact: If irritation occurs, flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.

First-aid measures after eye contact: In case of contact, immediately flush eyes with plenty of water. Remove contact lenses, if worn. If irritation persists, get medical attention.

First-aid measures after ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if distress develops.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation: May cause respiratory tract irritation.

Symptoms/injuries after skin contact: May cause skin irritation. Symptoms may include skin abrasion and redness.

Symptoms/injuries after eye contact: May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Symptoms/injuries after ingestion: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Treat for surrounding material.

5.2. Special hazards arising from the substance or mixture

Fire hazard: Product does not burn; however its packaging may. Products of combustion may include, and are not limited to: oxides of carbon.

5.3. Advice for firefighters

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. Clean up quickly and avoid generating dust. Wear suitable respiratory protection if dusty conditions arise. Avoid contact with eyes.

6.2. Methods and material for containment and cleaning up

For containment: Contain spill, then place in a suitable container. Minimize dust generation. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up: Vacuum or sweep material and place in a disposal container. Provide ventilation.

6.3. Reference to other sections

No additional information available.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Avoid contact with eyes. Do not swallow. Avoid generating and breathing dust. Good housekeeping is important to prevent accumulation of dust. The use of compressed air for cleaning clothing, equipment, etc, is not recommended. When using do not eat, drink or smoke.

Hygiene measures: Launder clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: No special storage requirements are needed.

7.3. Specific end use(s)

No additional information available.
SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Material</th>
<th>Control parameter</th>
<th>Limit (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone (1317-65-3)</td>
<td>OSHA PEL (TWA)</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL (TWA)</td>
<td>15 (total dust)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 (respirable fraction)</td>
</tr>
<tr>
<td>Magnesium carbonate (546-93-0)</td>
<td>OSHA PEL (TWA)</td>
<td>5</td>
</tr>
<tr>
<td>Iron oxide (Fe2O3) (1309-37-1)</td>
<td>ACGIH TWA</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL (TWA)</td>
<td>5</td>
</tr>
<tr>
<td>Aluminum oxide (1344-28-1)</td>
<td>OSHA PEL (TWA)</td>
<td>5</td>
</tr>
<tr>
<td>Quartz (14808-60-7)</td>
<td>ACGIH TWA</td>
<td>0.025</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL (TWA)</td>
<td>(30)/(%SiO₂ + 2) mg/m³ (total dust)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(250)/(%SiO₂ + 5) mppcf (respirable fraction)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(10)/(%SiO₂ + 2) mg/m³ (respirable fraction)</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Hand protection: Wear standard work gloves (leather, cotton, coated cotton, etc.) as needed to prevent abrasion.

Eye protection: Safety glasses or goggles are recommended when using product.

Skin and body protection: Wear suitable clothing common to do-it-yourself projects.

Respiratory protection: A NIOSH approved respirator is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. 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.

Environmental exposure controls: Maintain levels below Community environmental protection thresholds.

Other information: Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Powder/Granules.
Colour: Gray/White
Odour: None.
Odour threshold: No data available.
pH: No data available.
Relative evaporation rate (butylacetate=1): No data available.
Melting point: Magnesium and calcium carbonate decompose above 850°C (1562°F).
Freezing point: No data available.
Boiling point: No data available.
Flash point: No data available.
Self ignition temperature: No data available.
Decomposition temperature: No data available.
Flammability (solid, gas): No data available.
Vapour pressure: No data available.
Relative vapour density at 20 °C: No data available.
Relative density: 2.3 - 2.7
Solubility: Mostly insoluble
Log Pow: No data available.
Log Kow: No data available.
Viscosity, kinematic: No data available.
Viscosity, dynamic: No data available.
Limestone Flour
Safety Data Sheet

Explosive properties: No data available.
Oxidising properties: No data available.
Explosive limits: No data available.

9.2. Other information
No additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity
No dangerous reaction known under conditions of normal use.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use. Limestone Flour releases carbon dioxide when in contact with strong acids. May react violently with fluorine gas.

10.4. Conditions to avoid
Incompatible materials.

10.5. Incompatible materials

10.6. Hazardous decomposition products
When heated above 850°C (1562°F), magnesium and calcium carbonate decompose to form magnesium oxide or calcium oxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity: Not classified.

<table>
<thead>
<tr>
<th>Limestone Flour</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE (oral)</td>
<td>&gt;2000 mg/kg, rat</td>
</tr>
<tr>
<td>ATE (dermal)</td>
<td>&gt;2000 mg/kg, rabbit</td>
</tr>
<tr>
<td>ATE (inhalation)</td>
<td>&gt;5 mg/L 4h, rat</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Limestone (1317-65-3)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>6450 mg/kg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Silica, amorphous (7631-86-9)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>&gt;= 58.8 mg/l (Exposure time: 4 h)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Iron oxide (Fe2O3) (1309-37-1)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 10000 mg/kg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aluminum oxide (1344-28-1)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sulfur (7704-34-9)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 3000 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>&gt; 9.23 mg/l/4h</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quartz (14808-60-7)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>500 mg/kg</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Based on available data, the classification criteria are not met.
Serious eye damage/irritation: Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.
Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: May cause cancer.

<table>
<thead>
<tr>
<th>Silica, amorphous (7631-86-9)</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron oxide (Fe2O3) (1309-37-1)</td>
<td>3</td>
</tr>
<tr>
<td>Quartz (14808-60-7)</td>
<td>1</td>
</tr>
<tr>
<td>National Toxicology Program (NTP) Status</td>
<td>2</td>
</tr>
</tbody>
</table>

27/12/2013 EN (English)
Limestone Flour
Safety Data Sheet

Reproductive toxicity: Based on available data, the classification criteria are not met.
Specific target organ toxicity (single exposure): Based on available data, the classification criteria are not met.
Specific target organ toxicity (repeated exposure): Based on available data, the classification criteria are not met.
Aspiration hazard: Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation: May cause respiratory tract irritation.
Symptoms/injuries after skin contact: May cause skin irritation. Symptoms may include skin abrasion and redness.
Symptoms/injuries after eye contact: May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Symptoms/injuries after ingestion: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

SECTION 12: Ecological information
12.1. Toxicity
Ecology - general: No ecological consideration when used according to directions. Do not flush to sewer or allow to enter waterways.

12.2. Persistence and degradability
Limestone Flour
Persistence and degradability: No data available.

12.3. Bioaccumulative potential
Limestone Flour
Bioaccumulative potential: No data available.

12.4. Mobility in soil
Limestone Flour
Ecology - soil: No data available.

12.5. Other adverse effects
Other adverse effects: No data available.

SECTION 13: Disposal considerations
13.1. Waste treatment methods
Waste disposal recommendations: This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

SECTION 14: Transport information
In accordance with DOT
14.1. UN number
Not applicable.

14.2. UN proper shipping name
Not applicable.

14.3. Additional information
Other information: No supplementary information available.
Special transport precautions: Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information
15.1. US Federal regulations
Limestone (1317-65-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Magnesium carbonate (546-93-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Silica, amorphous (7631-86-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Iron oxide (Fe2O3) (1309-37-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Aluminum oxide (1344-28-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on SARA Section 313 (Specific toxic chemical listings)
SARA Section 313 - Emission Reporting: 1.0 % (fibrous forms)
**Limestone Flour**

**Safety Data Sheet**


---

### Sulfur (7704-34-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

### Quartz (14808-60-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

### Sodium oxide (Na₂O) (1313-59-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

### Potassium oxide (12136-45-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

---

**15.2. US State regulations**

<table>
<thead>
<tr>
<th>Limestone Flour</th>
<th>This product contains Crystalline Silica, Quartz and may also contain trace amounts of other chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Quartz (14808-60-7)</th>
<th>U.S. - California - Proposition 65 - Carcinogens List</th>
<th>U.S. - California - Proposition 65 - Developmental Toxicity</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Female</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Male</th>
<th>No significance risk level (NSRL)</th>
</tr>
</thead>
</table>

**SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:**

<table>
<thead>
<tr>
<th>IARC (I)</th>
<th>International Agency for Research on Cancer.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - Carcinogenic to humans;</td>
<td></td>
</tr>
<tr>
<td>2A - Probably carcinogenic to humans;</td>
<td></td>
</tr>
<tr>
<td>2B - Possibly carcinogenic to humans;</td>
<td></td>
</tr>
<tr>
<td>3 - Not classifiable;</td>
<td></td>
</tr>
<tr>
<td>4 - Probably not carcinogenic to humans.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NTP (N)</th>
<th>National Toxicology Program.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - Evidence of Carcinogenicity;</td>
<td></td>
</tr>
<tr>
<td>2 - Known Human Carcinogens;</td>
<td></td>
</tr>
<tr>
<td>3 - Reasonably anticipated to be Human Carcinogen;</td>
<td></td>
</tr>
<tr>
<td>4 - Substances delisted from report on Carcinogens;</td>
<td></td>
</tr>
<tr>
<td>5 - Twelfth Report - Items under consideration.</td>
<td></td>
</tr>
</tbody>
</table>

---

**SECTION 16: Other information**

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>NFPA health hazard</td>
<td>1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.</td>
</tr>
<tr>
<td>NFPA fire hazard</td>
<td>0 - Materials that will not burn.</td>
</tr>
<tr>
<td>NFPA reactivity</td>
<td>0 - Normally stable, even under fire exposure conditions, and are not reactive with water.</td>
</tr>
</tbody>
</table>

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.