

U S LIME COMPANY – St Clair
SAFETY DATA SHEET

1. Product and Company Identification

Product Name: Lime Kiln Dust CaO

Other Means of Identification: LKD, Cyclone Dust, Hi-Cal Lime Kiln Dust

Recommended Use:

Environmental: suitable for drying and chemically stabilizing many wastes, including heavy metal contamination.

Civil engineering: soil stabilization to improve the quality of problematic soils.

Agricultural: Use in light doses and makes an excellent ag lime because of the high calcium lime component.

List is not all inclusive.

Company Identification:

U S Lime Company – St Clair
P.O. Box 160
Marble City, OK 74945

Information: (918) 775-4433

Emergency: (800) 366-5106

2. Hazards Identification

Hazard Classification: Eye Damage Category -1, Skin Irritation Category -2, Specific Target Organ Toxicity Single Exposure 3 (Respiratory System), Carcinogen – 1.

Emergency Overview: Lime Kiln Dust is an odorless white or grayish-white granular powder. Contact can cause irritation to eyes, skin, respiratory system, and gastrointestinal tract. LKD may react violently with water, releasing heat which may ignite combustible materials in certain instances.

Potential Health Effects

Eyes: Contact can cause severe irritation or burning of eyes, including permanent damage.

Skin: Contact can cause severe irritation or burning of skin, especially in the presence of moisture.

Ingestion: This product can cause severe irritation or burning of gastrointestinal tract if swallowed.

Inhalation: This product can cause severe irritation of the respiratory system. Long-term exposure may cause permanent damage. Lime Kiln Dust is not listed by MSHA, OSHA, or IARC as a carcinogen, but this product may contain trace amounts of crystalline silica in the form of quartz or cristobalite, 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.

Medical Conditions Aggravated by Exposure: Contact may aggravate disorders of eyes, skin, gastrointestinal tract, and respiratory system.

Potential Environmental Effects: This material is alkaline and if released into water or moist soil will cause an increase in pH.

Signal Word: Danger

Hazard Statements: Danger! Causes skin irritation. Causes serious eye damage. May cause cancer through inhalation. May cause respiratory irritation. Reacts violently with water releasing heat which can ignite combustible materials. Causes damage to lungs through prolonged or repeated exposure.

Symbols:



Precautionary Statements:

Do not breathe dust. Do not eat, drink or smoke when using this product.

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

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 medical attention immediately. Inhaled: Remove person(s) to fresh air and keep comfortable for breathing. Seek medical attention if you feel unwell.

If exposed or concerned: Get medical advice.

Store in a corrosive resistant container. Do not store or ship in aluminum container.

Dispose of contents or containers in accordance with applicable regulations. Do not use water on material spills.

Hazards not otherwise classified: Lime Kiln Dust can react violently with water, releasing heat which can ignite combustible materials.

Ingredients with unknown toxicity: Not Applicable

3. Composition/Information on Ingredients

| Component | CAS # | % by weight |
|--------------------|------------|-------------|
| Calcium Oxide | 1305-78-8 | 55% - 80% |
| Magnesium Oxide | 1309-48-4 | <2 % |
| Crystalline Silica | 14808-60-7 | <2% |

4. First Aid Measures

Eyes: 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 lime dust has been washed out. Seek medical attention immediately. Do not rub eyes.

Skin: Contact can cause severe irritation or burning of skin, especially in the presence of moisture. Wash exposed area with large amounts of water. Seek medical attention immediately.

Ingestion: This product can cause severe irritation of the gastrointestinal tract if swallowed. Do not induce vomiting. Seek medical attention immediately. Never give anything by mouth unless instructed to do so by medical personnel.

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 and effects, both 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 1) carcinogenic to humans when inhaled. Inhalation of silica can also cause a chronic lung disorder, silicosis. Do not eat, drink or smoke when using this product.

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

5. Fire Fighting Measures

Extinguishing Media: Use dry chemical fire extinguisher. Do not use water or halogenated compounds, except that large amounts of water may be used to deluge small quantities of quicklime.

Fire Hazards: Quicklime is not combustible or flammable. However, quicklime reacts violently with water, and may release heat sufficient to ignite combustible materials in certain instances. Quicklime is not considered to be an explosion hazard, although reaction with water or other incompatible materials may rupture containers.

Hazardous Combustion Products: None.

Special Protective Equipment and Fire Fighting Instructions: Keep personnel away from and upwind of fire. Wear full fire-fighting turn-out gear (full Bunker gear), and respiratory protection (SCBA).

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Spill /Leak Procedures: Do NOT use water on bulk material spills. Lime reacts violently with water, releasing heat. Use proper protective equipment.

Small Spills: Use dry methods to collect spilled materials. Avoid generating dust. Do not clean up with compressed air. Store collected materials in dry, sealed plastic or metal containers. 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. Store spilled materials in dry, sealed plastic or metal containers.

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 a mild vinegar and water solution, or detergent and water.

7. Handling and Storage

Precautions for Safe Handling: Keep in tightly closed containers. Protect containers from physical damage. Avoid direct skin contact with the material.

Conditions for Safe Storage, including incompatibilities: Store in a cool, dry, and well-ventilated location. Do not store near incompatible materials (see Section 10 below). Keep away from moisture. Do not store or ship in aluminum containers.

8. Exposure Controls/Personal Protection

| Component | CAS # | Exposure Limits |
|--------------------|------------|--|
| Calcium Oxide | 1305-78-8 | OSHA PEL: 5 mg/m ³ ACGIH TLV: 2 mg/m ³ |
| Magnesium Oxide | 1309-48-4 | OSHA PEL: 10 mg/m ³ ACGIH TLV: 10 mg/m ³ |
| Crystalline Silica | 14808-60-7 | OSHA PEL: 10 mg/m ³ divided by % quartz + 2 (respirable fraction) ACGIH TLV: 0.025 mg/m ³ (respirable) |

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. Where 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.

9. Physical and Chemical Properties

Appearance: White or grayish-white material.

Physical State: Solid

Odor: Odorless

Odor threshold: Not applicable

pH at 25 degrees C: 12.45 approx.

Boiling Point: NA

Melting Point: 4658° F, 2570° C

Flash Point: Not Applicable

Evaporation Rate: NA

Flammability: NA

Upper/Lower flammability or explosive limits: NA

Vapor Pressure: N/A

Vapor Density: N/A

Relative Density: NA

Auto-ignition temperature: NA

Solubility in Water: Reacts with water to produce Ca(OH)₂ and large amounts of heat.

Partition co-efficient: n-octanol/water

Decomposition temperature: NA

Viscosity: NA

10. Stability and Reactivity

Stability: Chemically stable and reacts vigorously with water to form calcium hydroxide, releasing heat. LKD also reacts with carbon dioxide to form calcium carbonate. See also Incompatibility below.

Chemical stability: LKD is chemically stable

Possibility of hazardous reactions: See above

Conditions to Avoid: Do not allow LKD to come in contact with incompatible materials.

Incompatibility: LKD should not be mixed or stored with the following materials, due to the potential for violent reaction and release of heat:

WATER (unless in a controlled process)
ACIDS (unless in a controlled process)
REACTIVE FLUORIDATED COMPOUNDS
REACTIVE BROMINATED COMPOUNDS
REACTIVE POWERED METALS
ORGANIC ACID ANHYDRIDES
NITRO-ORGANIC COMPOUNDS
REACTIVE PHOSPHOROUS COMPOUNDS
INTERHALOGENATED COMPOUNDS

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 of exposure: See First Aid discussion above.

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

Carcinogen listing: LKD is not listed by MSHA, OSHA, or IARC as a carcinogen, but this product may contain trace amounts of crystalline silica, which has been classified by IARC as carcinogenic to humans when inhaled in the form of quartz or cristobalite.

12. Ecological Information:

Eco toxicity: Because of the high pH of this product, it would be expected to produce significant Eco toxicity upon exposure to aquatic organisms and aquatic systems in high concentrations.

Environmental Fate: This material shows no bioaccumulation effect or food chain concentration toxicity.

Persistence and degradability:

Bio accumulative: This material shows no bioaccumulation effect or food chain concentration toxicity.

Mobility in soil: High pH values will rapidly decrease over time as a result of recarbonation and will show very little mobility in soils.

Other adverse effects (such as hazardous to the ozone layer): This material is alkaline and if released into water or moist soil will cause an increase in pH.

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.

14. Transportation Information:

UN number: UN1910

UN Proper shipping name: Calcium Oxide Mixture

Transport hazard class: Hazard Class 8-Corrosive - When transported by air only

Packing group: Packing Group III - When transported by air only

Environmental hazards (e.g. Marine pollutant) (Yes/No): 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 73/79 and the IBC Code):

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, quicklime is classified in the Department of Transportation (DOT) regulations as a hazardous material. (49 CFR 172.101. For aircraft transport only, Calcium Oxide 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 100 kg. For quantities greater than 25 kg up to and including 100 kg, 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, quicklime 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 quicklime product for air transport.

LKD is not classified as a hazardous material by DOT when transported by means other than by air.

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 (RQ), 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.

All chemical ingredients are listed on the USEPA TSCA Inventory List.

OSHA/MSHA Regulations:

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

MSHA: not listed.

OSHA Specifically Regulated Substance (29CFR 1910) not listed.

State Regulations: Consult state and local authorities for guidance.

HMIS: Health Risks 3, Flammability 0, Reactivity 1, Personal Protection, E

NFPA: Health Hazard 3, Fire Hazard 0, Reactivity 0

16. Other Information:

Date of preparation or last revision of this Safety Data Sheet: 05/19/2015