



LTS Research Laboratories, Inc.
Safety Data Sheet
Calcium Oxide

1. Product and Company Identification

Trade Name: Calcium oxide
Chemical Formula: CaO
Recommended Use: Scientific research and development

Manufacturer/Supplier: LTS Research Laboratories, Inc.
Street: 2001 Oaks Pkwy
City: Belmont
State: North Carolina
Zip Code: 28012
Country: USA
Tel #: +1 (704) 899 2840

24-Hour Emergency Contact: 800-424-9300 (US & Canada)
+1-703-527-3887 (International)

2. Hazards Identification

Signal Word: Danger



Hazard Statements:
H315: Causes skin irritation
H318: Causes serious eye damage.
H335: May cause respiratory irritation.
H402: Harmful to aquatic life.

Precautionary Statements:
P261: Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264: Wash face, hands, and any exposed skin thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P273: Avoid release to the environment.
P280: Wear protective gloves/ eye protection/ face protection.
P301 + P330 + P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353: IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P312: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for Several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTER or doctor/ physician.
P332 + P313: If skin irritation occurs: Get medical advice/ attention.
P403 + P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.

P501: Dispose of contents/ container in accordance with local/ regional/ national/ international regulations.

HMIS Health Ratings (0-4):

Health:	3
Flammability:	0
Physical:	1

3. Composition

Chemical Family:	Ceramic
Additional Names:	Calcium(II) oxide

Calcium oxide (CaO):	
Percentage:	0-100 wt%
CAS #:	1305-78-8
EC #:	215-138-9

4. First Aid Procedures

General Treatment:	Seek medical attention if symptoms persist.
Special Treatment:	Treat Symptomatically.
Important Symptoms:	Causes severe skin burns. Causes serious eye damage. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

Inhalation:	Remove victim to fresh air. Supply oxygen if breathing is difficult. Do not use mouth-to-mouth method if victim ingested or inhaled the substance. Give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Seek immediate medical attention.
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Ingestion:	Immediately make victim drink water (two glasses at most). DO NOT induce vomiting. Seek medical attention.
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Skin:	Wash affected area with mild soap and water. Take off immediately all contaminated clothing. Remove any contaminated clothing. Seek medical attention.
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Eyes:	Flush eyes and eyelids with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention.
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5. Firefighting Measures

Flammability:	Non-flammable
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Extinguishing Media:	No special restrictions – use suitable extinguishing agent for surrounding material and type of fire. DO NOT USE WATER, Carbon dioxide, Foam
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Spec. Fire Fighting Procedure:	Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Prevent fire extinguishing water from contaminating surface water or the ground water system. See section 10 for decomposition products.
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6. Accidental Release Measures

If Material Is Released/Spilled:	Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.
Environmental Precautions:	Isolate runoff to prevent environmental pollution.

7. Handling and Storage

Handling Conditions:	Use only under a chemical fume hood. Wear personal protective equipment/ face protection. Avoid dust formation. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed, then seek immediate medical assistance. Handle under inert gas, protect from moisture.
Storage Conditions:	Store in a cool dry place in a tightly sealed container. Store under an inert atmosphere. Store apart from materials and conditions listed in section 10.
Work/Hygienic Maintenance:	Do not use tobacco or food in work area. Do not blow dust off clothing or skin with compressed air. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.
Ventilation:	Provide sufficient ventilation to maintain concentration at or below threshold limit.

8. Exposure Controls and Personal Protection

Permissible Exposure Limits:	5 mg/m ³ as CaO, long-term value
Threshold Limit Value:	2 mg/m ³ as CaO, long-term value
Special Equipment:	None
Respiratory Protection:	Dust Respirator. Filter type: P2
Protective Gloves:	Nitrile rubber gloves, 0.11 mm thick
Eye Protection:	Tightly fitting safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

9. Physical and Chemical Characteristics

Color	Off-white to Beige
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	1.3376 g/L at 20 °C
Boiling Point:	2850 °C
Melting Point:	450 °C
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	3.3 g/cc
Molecular weight:	56.08 g/mol

10. Reactivity

Stability:	Stable under recommended storage conditions. Moisture sensitive. Air sensitive
Reacts With:	Alcohols, Hydrogen fluoride, Hydrogen sulfide, Halogen-halogen compounds, Fluorine, Hydrazine hydrate, Glycerin, Acids, Sugars, Water, Strong oxidizing agents, Carbon dioxide. Hydrogen halides.
Incompatible Conditions:	Avoid exposure to moisture/ water and air. Avoid dust formation.
Hazardous Decomposition Products:	Metal oxide fume

11. Toxicological Information

Potential Health Effects:	
Eyes:	Avoid contact with eyes. Corrosive to the eyes and may cause severe damage including blindness. May cause irritation.
Skin:	May cause severe skin corrosion/ irritation.
Ingestion:	May be harmful if swallowed.
Inhalation:	May be harmful if inhaled.
Chronic:	N/A
Signs & Symptoms:	Ingestion causes severe swelling, severe damage to the delicate tissue and damage of perforation. Cough, shortness of breath, headache, nausea and vomiting.
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	> 2000 mg/kg for rat by mouth
Carcinogen:	N/A

12. Ecological Information

Aquatic Toxicity:	Low
Persistent Bioaccumulation Toxicity:	No
Very Persistent, Very Bioaccumulative:	No
Notes:	Do not empty into drains.

13. Disposal Considerations

Dispose of in accordance with local, state, national, and international regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

14. Transportation Data

Hazardous:	Hazardous for transportation as pieces/ powder only.
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Hazard Class:	8 Corrosive substances
Packing Group:	III
UN Number:	UN1910
Proper Shipping Name:	Calcium oxide

15. Regulatory Information

Sec 302 Extremely Hazardous:	No
Sec 304 Reportable Quantities:	No
Sec 313 Toxic Chemicals:	Yes

16. Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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