



Chemtrec: (800) 424-9300
Poison Center: (800) 562-8236
Revision Date: January 8th, 2019

SAFETY DATA SHEET

Identity: Calcium Oxide

Formula: CaO

SECTION I - GENERAL INFORMATION

Manufacturer: Super Conductor Materials, Inc.

The information below is believed to be accurate and represents the best information available to Super Conductor Materials, Inc. However, SCM makes no warranty, expressed or implied with respect to such information and assumes no liability resulting from its use.

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Molecular weight: 56.08

CAS #	OSHA PEL	ACGIH TLV	%
1305-78-8	2 mg/m ³	5 mg/m ³	0.0-100.0%

SECTION III – PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: 2850.00°C	Vapor Pressure (vs. air or mmHg): 00 mm Hg
Melting Point: 2572.00°C	Density: 3.25 – 3.38 gm/cc
Evaporation Rate: N/A	Flash Point: N/A
Solubility in water: Decomposes to form Ca(OH) ₂ & generating heat	

Appearance and odor: White or grayish-white granular powder and pieces, no odor.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

Method Used: Unknown *Explosive Limits:* LEL: N/A UEL: N/A
Extinguishing Media: Use class D or other suitable metal extinguishing agent. DO NOT USE: Water.

Special Fire Fighting Procedures:
Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.

Unusual Fire and Explosive Hazards: None recorded



SECTION V - REACTIVITY DATA

Stability: Unstable

Conditions to Avoid (instability): Will react with water to form calcium hydroxide and carbon dioxide (forming calcium carbonate) if exposed to air.

Incompatibility: Air; moisture; water; ethanol; interhalogens; fluorine; hydrogen fluoride, phosphorus oxide+heat+water, carbon dioxide, boric oxide and calcium chloride; perchlorates; nitrates; permanganates

Hazardous Decomposition or Byproducts: Calcium hydroxide and carbon dioxide

Hazardous Polymerization: Will not occur

Conditions to avoid (hazardous polymerization): None

SECTION VI - HEALTH HAZARD DATA

Route of entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: N/A

Calcium compounds: The fumes evolved by burning calcium in air are composed of calcium oxide which is an irritant to the skin, eyes and mucous membrane. Generally speaking, calcium compounds should be considered toxic only when they contain toxic components or as calcium oxide or hydroxide. Calcium compounds are common air contaminants. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

Signs and Symptoms of Overexposure:

Inhalation: May cause chemical burns, coughing and sneezing.

Ingestion: May cause stomach cramps, pain in swallowing, nausea, vomiting, diarrhea and faintness.

Skin: May cause itching and redness. May cause chemical burns on contact with moist skin.

Eye: May cause redness, itching, chemical burns and watering.

Health Hazards (Acute and Chronic):

Inhalation:

Acute: May cause severe irritation to the upper respiratory system, nose and throat; ulceration and perforation of the nasal septum; bronchitis and pneumonia.

Chronic: No chronic health effects recorded.

Ingestion:

Acute: May cause abdominal pain, stricture, nausea, vomiting, diarrhea and faintness.

Chronic: May cause blood disorders and bluish skin.

Skin:

Acute: May cause severe irritation and possible chemical burns on contact with moist skin.

Chronic: May cause dermatitis.

Eye:

Acute: May cause severe irritation and possible chemical burns.

Chronic: May cause blurred vision.

Target Organs: May affect the respiratory system, skin and eyes.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

Medical Conditions Aggravated by Exposure: Pre-existing respiratory disorders



Emergency and First Aid Procedures:

- Inhalation:* Remove victim to fresh air, keep warm and quiet, and give oxygen if breathing is difficult; seek medical attention
- Ingestion:* Give 1-2 glasses of milk or water and induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person
- Skin:* Remove contaminated clothing, brush material off skin, wash affected area with mild soap and water, and seek medical attention if symptoms persist
- Eye:* Flush eyes with lukewarm water, lifting upper and lower eyelids for at least 15 minutes and seek medical attention

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled:

Wear appropriate respiratory and protective equipment specified in section VIII. Isolate spill area, provide ventilation and extinguish sources of ignition. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust.

Waste disposal method:

Dispose of in accordance with state, local, and federal regulations.

Hazard Label Information:

Store in cool, dry area and in tightly sealed container. Wash thoroughly after handling.

Precautions to be taken in storing: Calcium Oxide reacts with water and moisture. Handle and store in a controlled environment and inert atmosphere such as argon gas.

SECTION VIII - CONTROL MEASURES

Protective Equipment Summary (Hazard Label Information):

NIOSH approved respirator, impervious gloves, safety glasses, clothes to prevent contact.

Ventilation:

- Local Exhaust: To maintain concentration at low exposure levels.
- Special: Handle in a dry, controlled atmosphere
- Mechanical (General): Not recommended.
- Other: Handle in an inert gas such as argon

Work/Hygienic/Maintenance Practices:

Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Handle in a dry, controlled area. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating and smoking.

Please be advised that N/A can either mean Not Applicable or No Data Has Been Established