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## Material Safety Data Sheet Calcium Oxide

ACC# 04030

Section 1 - Chemical Product and Company Identification

**MSDS Name:** Calcium Oxide  
**Catalog Numbers:** C114 3, C114 50, C114-3, C114-50, C1143, C1143LOT001, C11450, C117 500, C117-500, C117500  
**Synonyms:** Quicklime, burnt lime, calcia, calx, pebble lime, unslaked lime  
**Company Identification:**  
 Fisher Scientific  
 1 Reagent Lane  
 Fairlawn, NJ 07410  
**For information, call:** 201-796-7100  
**Emergency Number:** 201-796-7100  
**For CHEMTREC assistance, call:** 800-424-9300  
**For International CHEMTREC assistance, call:** 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
1305-78-8	CALCIUM OXIDE	100	215-138-9

**Hazard Symbols:** C  
**Risk Phrases:** 14 34 36/37/38

Section 3 - Hazards Identification

### EMERGENCY OVERVIEW

Appearance: white, light yellow, light gray. **Danger!** Corrosive. Contact with skin causes irritation and possible burns, especially if the skin is wet or moist. May cause severe eye irritation and possible injury. May cause severe respiratory and digestive tract irritation with possible burns. Eye contact may result in permanent eye damage.

**Target Organs:** Eyes.

#### Potential Health Effects

**Eye:** May result in corneal injury. Contact with liquid or vapor causes severe burns and possible irreversible eye damage.

**Skin:** Contact with skin causes irritation and possible burns, especially if the skin is wet or moist. May cause deep, penetrating ulcers of the skin.

**Ingestion:** Causes gastrointestinal tract burns. May cause circulatory system failure. May cause perforation of the digestive tract. Causes severe pain, nausea, vomiting, diarrhea, and shock.

**Inhalation:** Causes respiratory tract irritation. May cause chemical bronchitis with coughing and difficulty in breathing.

**Chronic:** Prolonged or repeated skin contact may cause dermatitis. Chronic inhalation and ingestion may cause effects similar to those of acute inhalation and ingestion. Repeated inhalation may cause perforation of the nasal septum.

### Section 4 - First Aid Measures

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid immediately. Do NOT allow victim to rub or keep eyes closed.

**Skin:** Get medical aid immediately. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Remove contaminated clothing and shoes.

**Ingestion:** Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately.

**Inhalation:** Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

**Notes to Physician:** Treat symptomatically and supportively.

**Antidote:** No specific antidote exists.

### Section 5 - Firefighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Substance is nonflammable. Use water with caution and in flooding amounts. Reacts violently with water.

**Extinguishing Media:** Use water spray to cool fire-exposed containers. Do NOT use carbon dioxide. Use extinguishing media most appropriate for the surrounding fire. Do NOT use halogenated agents. Use flooding quantities of water.

**Autoignition Temperature:** Not available.

**Flash Point:** Noncombustible.

**NFPA Rating:** Health=3, Flammability=0, Reactivity=1 Explosion Limits, Lower:

Not available. Upper: Not available.

### Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions.

### Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Keep container tightly closed. Avoid contact with clothing and other combustible materials. Do not get on skin or in eyes. Do not ingest or inhale.

**Storage:** Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from water. Store in glass containers.

### Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

#### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
CALCIUM OXIDE	2 mg/m <sup>3</sup>	2 mg/m <sup>3</sup> TWA 25 mg/m <sup>3</sup> IDLH	5 mg/m <sup>3</sup> TWA

**OSHA Vacated PELs:** CALCIUM OXIDE: 5 mg/m<sup>3</sup> TWA (not in effect as a result of reconsideration)

#### Personal Protective Equipment

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

### Section 9 - Physical and Chemical Properties

**Physical State:** Solid

**Appearance:** white, light yellow, light gray

**Odor:** odorless

**pH:** 12.4 @ 0.15% soln.

**Vapor Pressure:** Negligible.

**Vapor Density:** Not available.  
**Evaporation Rate:**  
**Viscosity:** Not available.  
**Boiling Point:** 2850 deg C  
**Freezing/Melting Point:** 2614 deg C  
**Decomposition Temperature:** Not available.  
**Solubility:** reacts with H<sub>2</sub>O forming Ca(OH)<sub>2</sub>  
**Specific Gravity/Density:** 3.37  
**Molecular Formula:** CaO  
**Molecular Weight:**

### Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.  
**Conditions to Avoid:** Dust generation, contact with water, acids, excess heat.  
**Incompatibilities with Other Materials:** Reacts with water to form calcium hydroxide and heat; reacts with carbon dioxide to form calcium carbonate.  
Incompatible with ethanol, boric oxide + calcium chloride, and interhalogens such as boron trifluoride, chlorine trifluoride, fluorine, hydrofluoric acid, phosphorus pentoxide, perchlorates, nitrates, and permanganates.  
**Hazardous Decomposition Products:** None.  
**Hazardous Polymerization:** Has not been reported.

### Section 11 - Toxicological Information

**RTECS#:**  
**CAS# 1305-78-8:** EW3100000  
**LD50/LC50:**  
Not available.

**Carcinogenicity:**  
**CAS# 1305-78-8:** Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.  
**Epidemiology:** No data available.  
**Teratogenicity:** No data available.  
**Reproductive Effects:** No data available.  
**Neurotoxicity:** No data available.  
**Mutagenicity:** No data available.  
**Other Studies:** No data available.

### Section 12 - Ecological Information

**Ecotoxicity:** Mosquito fish, TL<sub>m</sub>=240 ppm/24H, Sunfish, 100 ppm/3hr. is toxic.  
vector snail, 300 ppm/24hr is lethal.  
**Environmental Fate:** No information reported.  
**Physical/Chemical:** No information available.  
**Other:** None.

### Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

RCRA D-Series Maximum Concentration of Contaminants: None listed.  
 RCRA D-Series Chronic Toxicity Reference Levels: None listed.  
 RCRA F-Series: None listed.  
 RCRA P-Series: None listed.  
 RCRA U-Series: None listed.

### Section 14 - Transport Information

	US DOT	IATA	RID/ADR	IMO	Canada TDG
<b>Shipping Name:</b>	CALCIUM OXIDE	No information available.	No information available.	No information available. No information available.	
<b>Hazard Class:</b>	8				
<b>UN Number:</b>	UN1910				
<b>Packing Group:</b>	III				

### Section 15 - Regulatory Information

#### US FEDERAL

##### TSCA

CAS# 1305-78-8 is listed on the TSCA inventory.

##### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

##### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

##### Section 12b

None of the chemicals are listed under TSCA Section 12b.

##### TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

##### SARA

##### Section 302 (RQ)

None of the chemicals in this material have an RQ.

##### Section 302 (TPQ)

None of the chemicals in this product have a TPQ.

##### SARA Codes

CAS # 1305-78-8: acute, reactive.

##### Section 313

No chemicals are reportable under Section 313.

##### Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.

##### Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under

the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:**

None of the chemicals in this product are considered highly hazardous by OSHA.

**STATE**

CAS# 1305-78-8 can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

California No Significant Risk Level: None of the chemicals in this product are listed. **European/International Regulations**

**European Labeling in Accordance with EC Directives****Hazard Symbols:**

C

**Risk Phrases:**

R 14 Reacts violently with water. R 34 Causes burns. R 36/37/38 Irritating to eyes, respiratory system and skin.

**Safety Phrases:**

S 7/8 Keep container tightly closed and dry.

**WGK (Water Danger/Protection)**

CAS# 1305-78-8: 1

**Canada**

CAS# 1305-78-8 is listed on Canada's DSL/NDSL List.

This product has a WHMIS classification of E.

CAS# 1305-78-8 is not listed on Canada's Ingredient Disclosure List.

**Exposure Limits**

CAS# 1305-78-8: OEL-AUSTRALIA:TWA 2 mg/m<sup>3</sup> OEL-AUSTRIA:TWA 5 mg/m<sup>3</sup>

OEL-BELGIUM:TWA 2 mg/m<sup>3</sup> OEL-DENMARK:TWA 2 mg/m<sup>3</sup>

OEL-FINLAND:TWA 2 mg

/m<sup>3</sup> OEL-FRANCE:TWA 2 mg/m<sup>3</sup> OEL-GERMANY:TWA 5 mg/m<sup>3</sup>

OEL-INDIA:TWA 2

mg/m<sup>3</sup> OEL-THE NETHERLANDS:TWA 2 ppm (5 mg/m<sup>3</sup>) OEL-THE

PHILIPPINES:TW

A 5 mg/m<sup>3</sup> OEL-POLAND:TWA 2 mg/m<sup>3</sup> OEL-SWEDEN:TWA 2 mg/m<sup>3</sup>;STEL 5

mg/m<sup>3</sup>

OEL-TURKEY:TWA 5 mg/m<sup>3</sup> OEL-UNITED KINGDOM:TWA 2 mg/m<sup>3</sup> OEL IN

BULGA

RIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND,

SING

APORE, VIETNAM check ACGI TLV

**Section 16 - Additional Information**

**MSDS Creation Date:** 4/19/1995

**Revision #16 Date:** 12/12/1997

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