

# Material Safety Data Sheet

## Calcium oxide

ACC# 04030

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Calcium oxide**Catalog Numbers:** AC196910000, AC196910010, AC403895000, AC422830000, AC422830010, C114-3, C114-50, C117-500**Synonyms:** Lime; Quicklime; Burnt lime; Calx; Unslaked lime; Fluxing lime; Calcia; Pebble lime.**Company Identification:**

Fisher Scientific  
1 Reagent Lane  
Fair Lawn, 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	96+	215-138-9

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: very slightly beige powder.

**Danger!** Reacts violently with water. Causes burns by all exposure routes. Harmful if swallowed.**Target Organs:** Respiratory system, gastrointestinal system, eyes, skin.**Potential Health Effects****Eye:** Causes eye burns.**Skin:** Causes skin burns. May be harmful if absorbed through the skin.**Ingestion:** Harmful if swallowed. Causes gastrointestinal tract burns.**Inhalation:** Causes chemical burns to the respiratory tract. May be harmful if inhaled.**Chronic:** Prolonged or repeated skin contact may cause dermatitis. Chronic inhalation may cause nasal septum ulceration and perforation.

### Section 4 - First Aid Measures

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

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

**Ingestion:** Do not induce vomiting. Get medical aid immediately. Call a poison control center.

**Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

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

## Section 5 - Fire Fighting 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. Water reactive. Material will react with water and may release a flammable and/or toxic gas.

**Extinguishing Media:** Use foam, dry chemical, or carbon dioxide. DO NOT USE WATER!

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not available.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 3; Flammability: 1; Instability: 2; Special Hazard: -W-

## Section 6 - Accidental Release Measures

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

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Avoid generating dusty conditions. Provide ventilation. Do not expose spill to water. Do not get water inside containers. Do not let this chemical enter the environment.

## Section 7 - Handling and Storage

**Handling:** Do not allow water to get into the container because of violent reaction. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Do not allow contact with water. Use only in a chemical fume hood.

**Storage:** Store in a cool, dry place. Store in a tightly closed container. Corrosives area. Store protected from moisture. Store under an inert atmosphere.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash

facility and a safety shower. Use only under a chemical fume hood.

#### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Calcium oxide	2 mg/m <sup>3</sup> TWA	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 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## Section 9 - Physical and Chemical Properties

**Physical State:** Powder

**Appearance:** white to light yellow - very slightly beige

**Odor:** Odorless.

**pH:** 12.5 (1.65 g/L aq sol)

**Vapor Pressure:** Negligible.

**Vapor Density:** Not available.

**Evaporation Rate:** Negligible.

**Viscosity:** Not available.

**Boiling Point:** 2850 deg C @ 760 mmHg

**Freezing/Melting Point:** 2570 deg C

**Decomposition Temperature:** Not available.

**Solubility:** Reacts.

**Specific Gravity/Density:** Not available.

**Molecular Formula:** CaO

**Molecular Weight:** 56.08

## Section 10 - Stability and Reactivity

**Chemical Stability:** Air sensitive. Reacts violently with water. Moisture sensitive.

**Conditions to Avoid:** Incompatible materials, dust generation, exposure to air, exposure to moist air or water.

**Incompatibilities with Other Materials:** Strong oxidizing agents, acids, carbon dioxide, chlorine trifluoride, fluorine, halogens, phosphorus pentoxide, calcium chloride, metal halides, hydrofluoric acid, hydrogen fluoride, ethanol, boron trifluoride.

**Hazardous Decomposition Products:** Calcium hydroxide.

**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, NTP, or CA Prop 65.

**Epidemiology:** No information found**Teratogenicity:** No information found**Reproductive Effects:** No information found**Mutagenicity:** No information found**Neurotoxicity:** No information found**Other Studies:**

Section 12 - Ecological Information
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**Ecotoxicity:** No data available. No information available.**Environmental:** No information available.**Physical:** No information available.**Other:** Do not empty into drains.

Section 13 - Disposal Considerations
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Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.**RCRA U-Series:** None listed.

Section 14 - Transport Information
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	US DOT	Canada TDG
<b>Shipping Name:</b>	CALCIUM OXIDE	CALCIUM OXIDE
<b>Hazard Class:</b>	8	8
<b>UN Number:</b>	UN1910	UN1910
<b>Packing Group:</b>	III	III

Section 15 - Regulatory Information
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## 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.

### CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

### SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

### SARA Codes

CAS # 1305-78-8: immediate, 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 depleters.

This material does not contain any Class 2 Ozone depleters.

### 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, Pennsylvania, Minnesota, Massachusetts.

### California Prop 65

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 22 Harmful if swallowed.

R 35 Causes severe burns.

#### Safety Phrases:

S 25 Avoid contact with eyes.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**WGK (Water Danger/Protection)**

CAS# 1305-78-8: 1

**Canada - DSL/NDSL**

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

**Canada - WHMIS**

This product has a WHMIS classification of E.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

**Canadian Ingredient Disclosure List**

CAS# 1305-78-8 is listed on the Canadian Ingredient Disclosure List.

<b>Section 16 - Additional Information</b>
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**MSDS Creation Date:** 12/12/1997**Revision #12 Date:** 2/13/2008

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