

CALCIUM OXIDE

CAO

CAUTIONARY RESPONSE INFORMATION

Common Synonyms Quicklime Unslaked lime	Solid granules White to grey Odorless
Sinks and reacts violently with water. Water appears to boil.	
<p>Keep people away. Avoid contact with solid. Wear rubber overclothing (including gloves). Notify local health and pollution control agencies. Protect water intakes.</p>	
Fire	Not flammable. May cause fire on contact with water and combustibles. Extinguish adjacent fires with dry chemical or carbon dioxide. DO NOT USE WATER ON ADJACENT FIRES.
Exposure	CALL FOR MEDICAL AID. DUST Irritating to nose and throat. Move to fresh air. SOLID Will burn skin and eyes. Harmful if swallowed. Remove contaminated clothing and shoes. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water. IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk. DO NOT INDUCE VOMITING.
Water Pollution	HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.

1. CORRECTIVE RESPONSE ACTIONS

Dilute and disperse
Stop discharge
Collection Systems: Dredge

2. CHEMICAL DESIGNATIONS

2.1 **CG Compatibility Group:** Not listed.
2.2 **Formula:** CaO
2.3 **IMO/UN Designation:** 9.0/1910
2.4 **DOT ID No.:** 1910
2.5 **CAS Registry No.:** 1305-78-8
2.6 **NAERG Guide No.:** 157
2.7 **Standard Industrial Trade Classification:** 52329

3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Protective gloves, goggles, and any type of respirator prescribed for fine dust.
- 3.2 **Symptoms Following Exposure:** Causes burns on mucous membrane and skin. Inhalation of dust causes sneezing.
- 3.3 **Treatment of Exposure:** INGESTION: if victim is conscious, have him drink water or milk. Do NOT induce vomiting. SKIN AND EYES: flush with water and seek medical help.
- 3.4 **TLV-TWA:** 2 mg/m³
- 3.5 **TLV-STEL:** Not listed.
- 3.6 **TLV-Ceiling:** Not listed.
- 3.7 **Toxicity by Ingestion:** Currently not available
- 3.8 **Toxicity by Inhalation:** Currently not available.
- 3.9 **Chronic Toxicity:** None
- 3.10 **Vapor (Gas) Irritant Characteristics:** Not pertinent
- 3.11 **Liquid or Solid Characteristics:** Causes smarting of the skin and first-degree burns on short exposure and may cause secondary burns on long exposure.
- 3.12 **Odor Threshold:** Odorless
- 3.13 **IDLH Value:** 25 mg/m³
- 3.14 **OSHA PEL-TWA:** 5 mg/m³
- 3.15 **OSHA PEL-STEL:** Not listed.
- 3.16 **OSHA PEL-Ceiling:** Not listed.
- 3.17 **EPA AEGL:** Not listed

4. FIRE HAZARDS

- 4.1 **Flash Point:**
Not flammable
- 4.2 **Flammable Limits in Air:** Not flammable
- 4.3 **Fire Extinguishing Agents:** Extinguish adjacent fires with dry chemical or carbon dioxide.
- 4.4 **Fire Extinguishing Agents Not to Be Used:** Do not use water on adjacent fires.
- 4.5 **Special Hazards of Combustion Products:** Not pertinent
- 4.6 **Behavior in Fire:** Not pertinent
- 4.7 **Auto Ignition Temperature:** Not flammable
- 4.8 **Electrical Hazards:** Not pertinent
- 4.9 **Burning Rate:** Not flammable
- 4.10 **Adiabatic Flame Temperature:** Currently not available
- 4.11 **Stoichiometric Air to Fuel Ratio:** Not Pertinent
- 4.12 **Flame Temperature:** Currently not available
- 4.13 **Combustion Molar Ratio (Reactant to Product):** Not Pertinent
- 4.14 **Minimum Oxygen Concentration for Combustion (MOCC):** Not listed

7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** 96-97%
- 7.2 **Storage Temperature:** Currently not available
- 7.3 **Inert Atmosphere:** Currently not available
- 7.4 **Venting:** Currently not available
- 7.5 **IMO Pollution Category:** Currently not available
- 7.6 **Ship Type:** Currently not available
- 7.7 **Barge Hull Type:** Currently not available

8. HAZARD CLASSIFICATIONS

- 8.1 **49 CFR Category:** Corrosive material
- 8.2 **49 CFR Class:** 8
- 8.3 **49 CFR Package Group:** III
- 8.4 **Marine Pollutant:** No
- 8.5 **NFPA Hazard Classification:**
- | | |
|---------------------------|----------------|
| Category | Classification |
| Health Hazard (Blue)..... | 1 |
| Flammability (Red)..... | 0 |
| Instability (Yellow)..... | 1 |
- 8.6 **EPA Reportable Quantity:** Not listed.
- 8.7 **EPA Pollution Category:** Not listed.
- 8.8 **RCRA Waste Number:** Not listed
- 8.9 **EPA FWPCA List:** Not listed

5. CHEMICAL REACTIVITY

- 5.1 **Reactivity with Water:** Heat may cause ignition of combustibles. Material swells during reaction.
- 5.2 **Reactivity with Common Materials:** No reaction unless water present, then chief effect is that of heat liberated.
- 5.3 **Stability During Transport:** Stable
- 5.4 **Neutralizing Agents for Acids and Caustics:** Not pertinent
- 5.5 **Polymerization:** Not pertinent
- 5.6 **Inhibitor of Polymerization:** Not pertinent

9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 **Physical State at 15° C and 1 atm:** Solid
- 9.2 **Molecular Weight:** 56.08
- 9.3 **Boiling Point at 1 atm:** Not pertinent
- 9.4 **Freezing Point:** Not pertinent
- 9.5 **Critical Temperature:** Not pertinent
- 9.6 **Critical Pressure:** Not pertinent
- 9.7 **Specific Gravity:** 3.3 at 20°C (solid)
- 9.8 **Liquid Surface Tension:** Not pertinent
- 9.9 **Liquid Water Interfacial Tension:** Not pertinent
- 9.10 **Vapor (Gas) Specific Gravity:** Not pertinent
- 9.11 **Ratio of Specific Heats of Vapor (Gas):** Not pertinent
- 9.12 **Latent Heat of Vaporization:** Not pertinent
- 9.13 **Heat of Combustion:** Not pertinent
- 9.14 **Heat of Decomposition:** Not pertinent
- 9.15 **Heat of Solution:** Not pertinent
- 9.16 **Heat of Polymerization:** Not pertinent
- 9.17 **Heat of Fusion:** 218.1 cal/g
- 9.18 **Limiting Value:** Currently not available
- 9.19 **Reid Vapor Pressure:** Currently not available

6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:**
92 ppm/7 hr/trout/toxic/fresh water
240 ppm/24 hr/mosquito fish/TL₅₀/fresh water
- 6.2 **Waterfowl Toxicity:** Currently not available
- 6.3 **Biological Oxygen Demand (BOD):** Not pertinent
- 6.4 **Food Chain Concentration Potential:** Not pertinent
- 6.5 **GESAMP Hazard Profile:**
Bioaccumulation: 0
Damage to living resources: 1
Human Oral hazard: -
Human Contact hazard: -
Reduction of amenities: -

NOTES



<http://zenstoves.net>

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9.20 SATURATED LIQUID DENSITY		9.21 LIQUID HEAT CAPACITY		9.22 LIQUID THERMAL CONDUCTIVITY		9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F	Temperature (degrees F)	British thermal unit inch per hour-square foot-F	Temperature (degrees F)	Centipoise
	N O T P E R T I N E N T		N O T P E R T I N E N T		N O T P E R T I N E N T		N O T P E R T I N E N T

9.24 SOLUBILITY IN WATER		9.25 SATURATED VAPOR PRESSURE		9.26 SATURATED VAPOR DENSITY		9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
	R E A C T S		N O T P E R T I N E N T		N O T P E R T I N E N T		N O T P E R T I N E N T