CALCIUM

CAM

CAUTIONARY RESPONSE INFORMATION

Common Synonyms	Solid Silvery to grayish white Odorless Sinks in water. Reacts slowly with water.

Keep people away. Avoid contact with solid and dust.
Wear rubber overclothing (including gloves).
Call fire department.
Notify local health and pollution control agencies.
Protect water intakes.

Fire	FLAMMABLE. Extinguish with dry graphite, soda ash, or other inert powder. DO NOT USE WATER, FOAM, CARBON DIOXIDE OR VAPORIZING LIQUIDS ON FIRE.
Exposure	Call for medical aid. SOLID Will burn skin and eyes. Remove contaminated clothing and shoes. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water.
Water Pollution	Dangerous to aquatic life in high 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

Stop discharge
Collection Systems: Pump; Dredge

2. CHEMICAL DESIGNATIONS

2.1 CG Compatibility Group: Not listed.
2.2 Formula: Ca
2.3 IMO/UN Designation: 4.3/1401
2.4 DOT ID No.: 1401
2.5 CAS Registry No.: Currently not available
2.6 NAERG Guide No.: 138
2.7 Standard Industrial Trade Classification: 52229

3. HEALTH HAZARDS

3.1 Personal Protective Equipment: Goggles and rubber gloves.
3.2 Symptoms Following Exposure: Contact with eyes or skin produces caustic burns.
3.3 Treatment of Exposure: Flush with water
3.4 TLV-TWA: Not listed.
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: Currently not available
3.12 Odor Threshold: Odorless
3.13 IDLH Value: Not listed.
3.14 OSHA PEL-TWA: Not listed.
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 pertinent (flammable solid)
4.2 Flammable Limits in Air: Not pertinent
4.3 Fire Extinguishing Agents: Dry graphite, soda ash, powdered sodium chloride, or appropriate metal fire extinguishing dry powder.
4.4 Fire Extinguishing Agents Not to Be Used: Water, halogenated hydrocarbons, dry chemical, carbon dioxied, foam
4.5 Special Hazards of Combustion Products: Not pertinent
4.6 Behavior in Fire: Burns violently, especially if finely divided.
4.7 Auto Ignition Temperature: 1454+–18°F
4.8 Electrical Hazards: Not pertinent
4.9 Burning Rate: Not pertinent
4.10 Adiabatic Flame Temperature: Currently not available
4.11 Stoichometric Air to Fuel Ratio: 2.4 (calc.)
4.12 Flame Temperature: Currently not available
4.13 Combustion Molar Ratio (Reactant to Product): 1.0 (calc.)
4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed

5. CHEMICAL REACTIVITY

5.1 Reactivity with Water: Reacts to form flammable hydrogen gas, which may ignite. The reaction is not violent.
5.2 Reactivity with Common Materials: Reacts with moist air to form skin of hydroxide. The reaction is not hazardous.
5.3 Stability During Transport: Stable
5.4 Neutralizing Agents for Acids and Caustics: Flush with water
5.5 Polymerization: Stable
5.6 Inhibitor of Polymerization: Stable

6. WATER POLLUTION

6.1 Aquatic Toxicity: See Calcium hydroxide (CAH)
6.2 Waterfowl Toxicity: See Calcium hydroxide (CAH)
6.3 Biological Oxygen Demand (BOD): None
6.4 Food Chain Concentration Potential: None
6.5 GESAMP Hazard Profile: Not listed

7. SHIPPING INFORMATION

7.1 Grades of Purity: Commercial, 99.5%; redistilled 99.9%
7.2 Storage Temperature: Ambient
7.3 Inert Atmosphere: No requirement
7.4 Venting: Sealed containers must be in a ventilated area.
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: Dangerous When Wet
8.2 49 CFR Class: 4.3
8.3 49 CFR Package Group: II
8.4 Marine Pollutant: No
8.5 NFPA Hazard Classification:

Category	Classification
Health Hazard (Blue).....	1
Flammability (Red).....	1
Instability (Yellow).....	2
Special (White).....	~~W~~

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

9. PHYSICAL & CHEMICAL PROPERTIES

9.1 Physical State at 15° C and 1 atm: Solid
9.2 Molecular Weight: 40.1
9.3 Boiling Point at 1 atm: 2,714°F = 1,490°C = 1,763°K
9.4 Freezing Point: 1,562°F = 850°C = 1,123°K
9.5 Critical Temperature: Not pertinent
9.6 Critical Pressure: Not pertinent
9.7 Specific Gravity: 1.55 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: –6790 Btu/lb = –3,770 cal/g = –158 X 10^5 J/kg
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: 55.7 cal/g
9.18 Limiting Value: Currently not available
9.19 Reid Vapor Pressure: Currently not available

NOTES

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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
	NOT PERTINENT		NOT PERTINENT		NOT PERTINENT		NOT PERTINENT

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
	REACTS		NOT PERTINENT		NOT PERTINENT		NOT PERTINENT