

CALCIUM CHLORATE

CCC

CAUTIONARY RESPONSE INFORMATION

Common Synonyms	Solid	White	Odorless
	Sinks and mixes with water.		
	<p>Evacuate. Keep people away. Shut off ignition sources and call fire department. Avoid contact with solid and dust. Notify local health and pollution control agencies. Protect water intakes.</p>		
Fire	Not flammable. May explode on contact with combustibles. Irritating gases may be produced when heated. Combat fires from safe distance or protected location. Flood discharge area with water.		
Exposure	Call for medical aid. DUST Irritating to eyes, nose and throat. Move victim to fresh air. If in eyes, hold eyelids open and flush with plenty of water. SOLID Irritating to 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 and have victim induce vomiting. IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS, do nothing except keep victim warm.		
Water Pollution	Effect of low concentrations on aquatic life is unknown. 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

2. CHEMICAL DESIGNATIONS

- 2.1 CG Compatibility Group: Not listed.
- 2.2 Formula: Ca(ClO₂)₂
- 2.3 IMO/UN Designation: 5.1/1452
- 2.4 DOT ID No.: 1452
- 2.5 CAS Registry No.: 10137-74-3
- 2.6 NAERG Guide No.: 140
- 2.7 Standard Industrial Trade Classification: 52339

3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Goggles or face shield; dust respirator; coveralls or other protective clothing.
- 3.2 **Symptoms Following Exposure:** Inhalation of dust causes irritation of upper respiratory system. Dust irritates eyes and skin. Ingestion causes abdominal pain, nausea, vomiting, diarrhea, pallor, shortness of breath, unconsciousness.
- 3.3 **Treatment of Exposure:** INHALATION: remove to fresh air. EYES: flush with water for 15 min. SKIN: flush with water. INGESTION: induce vomiting and get medical attention.
- 3.4 **TLV-TWA:** Not listed.
- 3.5 **TLV-STEL:** Not listed.
- 3.6 **TLV-Ceiling:** Not listed.
- 3.7 **Toxicity by Ingestion:** Grade 2; oral LD₅₀ = 4,500 mg/kg (rat)
- 3.8 **Toxicity by Inhalation:** Currently not available.
- 3.9 **Chronic Toxicity:** Currently not available
- 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 flammable but may cause fire with other materials.
- 4.2 **Flammable Limits in Air:** Not pertinent
- 4.3 **Fire Extinguishing Agents:** Flood with water.
- 4.4 **Fire Extinguishing Agents Not to Be Used:** Not pertinent
- 4.5 **Special Hazards of Combustion Products:** Not pertinent
- 4.6 **Behavior in Fire:** When involved in a fire, may cause an explosion. Irritating gases may be generated when heated.
- 4.7 **Auto Ignition Temperature:** Not pertinent
- 4.8 **Electrical Hazards:** Not pertinent
- 4.9 **Burning Rate:** Not pertinent
- 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

5. CHEMICAL REACTIVITY

- 5.1 **Reactivity with Water:** No reaction
- 5.2 **Reactivity with Common Materials:** May form an explosive mixture with finely divided combustible material. The mixture may ignite when rubbed.
- 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

6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:**
Currently not available
- 6.2 **Waterfowl Toxicity:** Currently not available
- 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. May be shipped as dihydrate.
- 7.2 **Storage Temperature:** Ambient
- 7.3 **Inert Atmosphere:** No requirement
- 7.4 **Venting:** Open
- 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:** Oxidizer
- 8.2 **49 CFR Class:** 5.1
- 8.3 **49 CFR Package Group:** II
- 8.4 **Marine Pollutant:** No
- 8.5 **NFPA Hazard Classification:** Not listed
- 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:** 207
- 9.3 **Boiling Point at 1 atm:** Decomposes
- 9.4 **Freezing Point:** 644°F = 340°C = 613°K
- 9.5 **Critical Temperature:** Not pertinent
- 9.6 **Critical Pressure:** Not pertinent
- 9.7 **Specific Gravity:** 2.710 at 0°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:** (est.) -54 Btu/lb = -30 cal/g = -1.3 X 10⁵ J/kg
- 9.16 **Heat of Polymerization:** Not pertinent
- 9.17 **Heat of Fusion:** Currently not available
- 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
	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
34	60.240		N		N		N
36	60.490		O		O		O
38	60.730		T		T		T
40	60.980		P		P		P
42	61.220		E		E		E
44	61.470		R		R		R
46	61.710		T		T		T
48	61.960		I		I		I
50	62.200		N		N		N
52	62.440		E		E		E
54	62.690		N		N		N
56	62.930		T		T		T
58	63.180		E		E		E
60	63.420		N		N		N
62	63.670		T		T		T
64	63.910						
66	64.160						
68	64.400						
70	64.639						
72	64.889						
74	65.129						
76	65.379						
78	65.620						
80	65.870						
82	66.110						
84	66.360						