

# POTASSIUM CHLORATE

PCR

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b>		Solid	White	Odorless
Chlorate of potash Chlorate of potassium Potrate		Mixes with water.		
<p><b>Keep people away.</b>  <b>Shut off ignition sources and call fire department.</b>  <b>Notify local health and pollution control agencies.</b>  <b>Protect water intakes.</b></p>				
<b>Fire</b>	Not flammable. May cause fire on contact with combustibles. <b>POISONOUS GASES ARE PRODUCED IN FIRE.</b> Flood discharged area with water.			
<b>Exposure</b>	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. If swallowed will cause nausea, vomiting or loss of consciousness. 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.			
<b>Water Pollution</b>	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: KClO<sub>3</sub>
- 2.3 IMO/UN Designation: 5.1/1485
- 2.4 DOT ID No.: 1485
- 2.5 CAS Registry No.: 3811-04-9
- 2.6 NAERG Guide No.: 140
- 2.7 Standard Industrial Trade Classification: 52339

### 3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Dust mask; rubber gloves; goggles; protective clothing to prevent contact with skin.
- 3.2 **Symptoms Following Exposure:** Inhalation of dust can irritate nose and throat. Contact with eyes or skin causes irritation. Ingestion causes abdominal pain, nausea, vomiting, cyanosis, collapse.
- 3.3 **Treatment of Exposure:** EYES: flush with water for at least 15 min. SKIN: wash with soap and water. INGESTION: dilute by drinking soapy or salty water to induce vomiting; call physician.
- 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; LD<sub>50</sub> = 0.5 to 5 g/kg
- 3.8 **Toxicity by Inhalation:** Currently not available.
- 3.9 **Chronic Toxicity:** Currently not available
- 3.10 **Vapor (Gas) Irritant Characteristics:** Currently not available
- 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 upon contact with ordinary combustibles
- 4.2 **Flammable Limits in Air:** Not pertinent
- 4.3 **Fire Extinguishing Agents:** Water on adjacent fires
- 4.4 **Fire Extinguishing Agents Not to Be Used:** Not pertinent
- 4.5 **Special Hazards of Combustion Products:** Toxic fumes are formed in fires.
- 4.6 **Behavior in Fire:** Decomposes when hot to form oxygen, which increases severity of fire.
- 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:** Contact with combustible material may cause fire.
- 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:**  
 Bioaccumulation: 0  
 Damage to living resources: 0  
 Human Oral hazard: 2  
 Human Contact hazard: 0  
 Reduction of amenities: 0

### 7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** Commercial: 99.7+%; Reagent; Purified
- 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:**
- | Category                  | Classification |
|---------------------------|----------------|
| Health Hazard (Blue)..... | 0 2            |
| Flammability (Red).....   | 0 0            |
| Instability (Yellow)..... | 0 0            |
| Special (White).....      | OX OX          |

- \* First column refers to non-fire situation.
- 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:** 122.6
- 9.3 **Boiling Point at 1 atm:** Not pertinent (decomposes)
- 9.4 **Freezing Point:** 680°F = 360°C = 633°K
- 9.5 **Critical Temperature:** Not pertinent
- 9.6 **Critical Pressure:** Not pertinent
- 9.7 **Specific Gravity:** 2.34 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:** -176 Btu/lb = -98 cal/g = -4.1 X 10<sup>5</sup> J/kg
- 9.15 **Heat of Solution:** 147 Btu/lb = 81.9 cal/g = 3.43 X 10<sup>5</sup> 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	3.522		N O T		N O T		N O T
36	3.744		P E R T I N E N T		P E R T I N E N T		P E R T I N E N T
38	3.966						
40	4.188						
42	4.411						
44	4.633						
46	4.855						
48	5.077						
50	5.300						
52	5.522						
54	5.744						
56	5.966						
58	6.188						
60	6.411						
62	6.633						
64	6.855						
66	7.077						
68	7.300						
70	7.522						
72	7.744						
74	7.966						
76	8.188						
78	8.411						
80	8.633						
82	8.855						
84	9.077						