

POTASSIUM DICHROMATE

PTD

CAUTIONARY RESPONSE INFORMATION

Common Synonyms Bichrome Potassium bichromate		Solid crystals	Red to orange	Odorless
		Sinks and mixes with water.		
Keep people away. Avoid contact with solid and dust. Notify local health and pollution control agencies. Protect water intakes.				
Fire	Not flammable. May cause fire on contact with combustibles. Flood discharge area with water. Cool exposed containers with water.			
Exposure	CALL FOR MEDICAL AID. DUST Irritating to eyes, nose, and throat. If inhaled, will cause difficult breathing. Move to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. SOLIDS Will burn 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. DO NOT INDUCE VOMITING.			
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

Dilute and disperse
Stop discharge
Collection Systems: Dredge

2. CHEMICAL DESIGNATIONS

2.1 **CG Compatibility Group:** Not listed.
2.2 **Formula:** K₂Cr₂O₇
2.3 **IMO/UN Designation:** 9.0/1874
2.4 **DOT ID No.:** 1479
2.5 **CAS Registry No.:** 7778-50-9
2.6 **NAERG Guide No.:** 140
2.7 **Standard Industrial Trade Classification:** 52389

3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Approved dust mask; protective gloves; goggles or face shield.
3.2 **Symptoms Following Exposure:** Highly corrosive to skin and mucous membranes. If ingested, causes violent gastroenteritis, peripheral vascular collapse, vertigo, muscle cramps, coma, and (later) toxic nephritis with glycosuria. Allergic reactions may also occur.
3.3 **Treatment of Exposure:** INGESTION: have victim drink water or milk; do NOT induce vomiting. SKIN: treat like acid burns; external lesions may be scrubbed with 2% solution of sodium thiosulfate.
3.4 **TLV-TWA:** Not listed.
3.5 **TLV-STEL:** Not listed.
3.6 **TLV-Ceiling:** Not listed.
3.7 **Toxicity by Ingestion:** Grade 3; LD₅₀ to 500 mg/kg (human)
3.8 **Toxicity by Inhalation:** Currently not available.
3.9 **Chronic Toxicity:** Some suggestion of lung cancer.
3.10 **Vapor (Gas) Irritant Characteristics:** Dusts or mists may cause severe irritation of eyes and throat and can cause eye and lung injury. They cannot be tolerated even at low concentrations.
3.11 **Liquid or Solid Characteristics:** Severe skin irritant; causes second-and third-degree burns on short contact and is very injurious to the eyes.
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
4.2 **Flammable Limits in Air:** Not flammable
4.3 **Fire Extinguishing Agents:** Flood spill area 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:** May decompose, generating oxygen. Supports the combustion of other materials.
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

5. CHEMICAL REACTIVITY

- 5.1 **Reactivity with Water:** No reaction
5.2 **Reactivity with Common Materials:**
Ignition may occur when in contact with finely divided combustibles, such as sawdust.
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:**
739 ppm/24 hr/bluegill/TL₅₀/fresh water
17.8 ppm^a/silver salmon/toxic/salt water
^aTime period not specified.
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: 2
Human Oral hazard: 2
Human Contact hazard: II
Reduction of amenities: XX

7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** 99.9%
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:** Currently not available.
8.4 **Marine Pollutant:** No
8.5 **NFPA Hazard Classification:**

Category	Classification
Health Hazard (Blue).....	3
Flammability (Red).....	0
Instability (Yellow).....	0

8.6 **EPA Reportable Quantity:** 10 pounds
8.7 **EPA Pollution Category:** A
8.8 **RCRA Waste Number:** Not listed
8.9 **EPA FWPCA List:** Yes

9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 **Physical State at 15° C and 1 atm:** Solid
9.2 **Molecular Weight:** 294.19
9.3 **Boiling Point at 1 atm:** Decomposes
9.4 **Freezing Point:** 748°F = 398°C = 671°K
9.5 **Critical Temperature:** Not pertinent
9.6 **Critical Pressure:** Not pertinent
9.7 **Specific Gravity:** 2.676 at 25°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:** 29.8 cal/g
9.18 **Limiting Value:** Currently not available
9.19 **Reid Vapor Pressure:** Currently not available

NOTES

POTASSIUM DICHROMATE

PTD

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	5.094		N		N		N
36	5.594		O		O		O
38	6.094		T		T		T
40	6.594		P		P		P
42	7.094		E		E		E
44	7.594		R		R		R
46	8.094		T		T		T
48	8.594		I		I		I
50	9.094		N		N		N
52	9.594		E		E		E
54	10.090		N		N		N
56	10.590		T		T		T
58	11.090		P		P		P
60	11.590		E		E		E
62	12.090		R		R		R
64	12.590		T		T		T
66	13.090						
68	13.590						
70	14.090						
72	14.590						
74	15.090						
76	15.590						
78	16.090						
80	16.590						
82	17.090						
84	17.590						