

ZINC BICHROMATE

ZBC

CAUTIONARY RESPONSE INFORMATION

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| Common Synonyms Zinc dichromate | Solid, crystals powder Reddish-brown Orange-yellow Mixes with water. |
| <p>Keep people away. Avoid contact with solid and dust. Wear goggles, self-contained breathing apparatus, and rubber overclothing (including gloves). Notify local health and pollution control agencies. Protect water intakes.</p> | |
| Fire | Not flammable. May cause fire on contact with combustibles. Flood discharge area with water. Cool exposed containers with water. |
| Exposure | <p>CALL FOR MEDICAL AID. DUST Irritating to eyes, nose, and throat. Harmful if inhaled. Move to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.</p> <p>SOLID Will burn skin and eyes. If swallowed can cause dizziness, nausea, convulsions, and coma. 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.</p> |
| 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. |

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| <p>1. CORRECTIVE RESPONSE ACTIONS Dilute and disperse Stop discharge Contain Collection Systems: Pump; Dredge</p> | <p>2. CHEMICAL DESIGNATIONS 2.1 CG Compatibility Group: Not listed. 2.2 Formula: ZnCr₂O₇·3H₂O 2.3 IMO/UN Designation: Not listed 2.4 DOT ID No.: Not listed 2.5 CAS Registry No.: Currently not available 2.6 NAERG Guide No.: Not listed 2.7 Standard Industrial Trade Classification: 52431</p> |
| <p>3. HEALTH HAZARDS</p> <p>3.1 Personal Protective Equipment: Rubber gloves, face shield or goggles, approved dust mask. 3.2 Symptoms Following Exposure: INHALATION: Corrosive to mucous membranes continuous exposure may lead to perforation of nasal septum. EYES: Conjunctivitis and lacrimation. SKIN: Corrosive producing deep penetrating ulcers to exposed area. Slow to heal. INGESTION: Has a harsh metallic taste. May cause vertigo, thirst, abdominal pain, vomiting, shock, convulsions and coma. 3.3 Treatment of Exposure: Call a physician. INHALATION: Remove from exposure. EYES: Wash with running water. SKIN: Wash with copious amounts of water. INGESTION: Gastric lavage, induce vomiting, catharsis. Give milk or starch drinks to relieve irritation. 3.4 TLV-TWA: 0.01 mg/m³ as Cr. 3.5 TLV-STEL: Not listed. 3.6 TLV-Ceiling: Not listed. 3.7 Toxicity by Ingestion: Grade 3; LD₅₀ = 50 to 500 mg/kg. 3.8 Toxicity by Inhalation: Currently not available. 3.9 Chronic Toxicity: Carcinogenic-chromates have carcinogenic potential. 3.10 Vapor (Gas) Irritant Characteristics: Currently not available 3.11 Liquid or Solid Characteristics: Causes smarting of the skin and first-degree burns on short-exposure; may cause second-degree burns on long exposure. 3.12 Odor Threshold: Currently not available 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: 0.1 mg/m³ as CrO₃ 3.17 EPA AEGL: Not listed</p> | |

4. FIRE HAZARDS

- 4.1 **Flash Point:**
Not flammable
- 4.2 **Flammable Limits in Air:** Not flammable
- 4.3 **Fire Extinguishing Agents:** Not pertinent
- 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:** Currently not available
- 4.7 **Auto Ignition Temperature:** Not flammable
- 4.8 **Electrical Hazards:** Currently not available
- 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:** Currently not available
- 5.3 **Stability During Transport:** Hygroscopic
- 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:**
96-hour TL₅₀ Bluegills = 1.9 to 4.2 mg/l as zinc in soft water
96-hour TL₅₀ Bluegills in hard water = 10.1 to 12.9 mg
96-hour TL₅₀ Mosquito fish = 56 to 135 mg/l as Cr
- 6.2 **Waterfowl Toxicity:** Currently not available
- 6.3 **Biological Oxygen Demand (BOD):** 62.4 mg/l Zn will cause a 50% drop in the five day BOD.
- 6.4 **Food Chain Concentration Potential:**
Rainbow trout can accumulate Cr from water containing as little as 10⁻⁶ g/l. Zn can accumulate in some organisms.
- 6.5 **GESAMP Hazard Profile:** Not listed

7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** Currently not available
- 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:** Not listed
- 8.2 **49 CFR Class:** Not pertinent
- 8.3 **49 CFR Package Group:** Not listed.
- 8.4 **Marine Pollutant:** No
- 8.5 **NFPA Hazard Classification:**

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|---------------------------|----------------|
| Category | Classification |
| Health Hazard (Blue)..... | 3 |
| Flammability (Red)..... | 0 |
| Instability (Yellow)..... | 1 |
| Special (White)..... | OX |
- 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:** 335.45
- 9.3 **Boiling Point at 1 atm:** Currently not available
- 9.4 **Freezing Point:** Currently not available
- 9.5 **Critical Temperature:** Currently not available
- 9.6 **Critical Pressure:** Currently not available
- 9.7 **Specific Gravity:** Currently not available
- 9.8 **Liquid Surface Tension:** Not pertinent
- 9.9 **Liquid Water Interfacial Tension:** Not pertinent
- 9.10 **Vapor (Gas) Specific Gravity:** 11.57 (calculated)
- 9.11 **Ratio of Specific Heats of Vapor (Gas):** Currently not available
- 9.12 **Latent Heat of Vaporization:** Currently not available
- 9.13 **Heat of Combustion:** Not pertinent
- 9.14 **Heat of Decomposition:** Currently not available
- 9.15 **Heat of Solution:** Currently not available
- 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 |
| | 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 |
| | SOLUBLE | | CURRENTLY NOT AVAILABLE | | CURRENTLY NOT AVAILABLE | | CURRENTLY NOT AVAILABLE |